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U. S. DEPARTMENT OF LABOR
JAMES J. DAVIS, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

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SPECIAL FEATURES IN THIS ISSUE

- Use of cost-of-living figures in wage adjustments, page 1
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- Unemployment in Europe, page 24
- Workmen's compensation and the conflict of laws, page 56
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- Wages and hours in foundries and machine shops, 1927, page 123

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Association of Industrial Accident Boards and Commissions.
Bulletin No. 456.**

**Health and recreation activities in industrial establishments, 1926
Bulletin No. 458.**

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This Issue in Brief

Trade-unions are making serious efforts to meet the problem of unemployment among their members. They seek to do this by limiting their membership, by insisting upon the equal division of work among the regular workers, and by helping the worker who has lost his job to find another. Several labor organizations of national scope maintain either a regular employment office or an information service, and practically all locals regard the finding of jobs for members as part of their regular duties. To the man who is out of employment three national organizations pay unemployment benefits, and many others exempt him from the payment of dues while he is out of work. Other labor organizations have resorted to unemployment insurance within the industry (p. 8).

Although wage adjustments are now seldom determined solely by changes in the cost of living, information regarding such changes does enter as a very important factor into practically all wage discussions by employers, employees, and arbitration boards. An article beginning on page 1 brings together some of the more striking illustrations of the practical uses of the cost-of-living indexes published semiannually by the Bureau of Labor Statistics. The weighting system used by the bureau in compiling these indexes is based on the family-budget study made in 1918-19. Because many changes have taken place in American habits and standards of living, a new budgetary study is extremely desirable in order that the indexes may be more accurate.

Wage earnings in foundries and machine shops showed a definite increase between 1925 and 1927, according to the biennial wage survey of the industry just completed by the Bureau of Labor Statistics. A preliminary report (p. 123) gives detailed figures regarding wages and hours of labor, by occupation and by State.

All States and the Territory of Hawaii are now cooperating under the national vocational education act. The new State plans for the next five years presented for approval in the fiscal year 1926-27 showed very definite advancement in State programs. During that year the State, Federal, and local expenditures for vocational education aggregated over 24½ million dollars—an increase of more than 1½ million dollars over the preceding 12 months (p. 109).

The campaign against tuberculosis in the United States has resulted in a general decline in the death rate from this cause, the improvement being greatest in the industrial population, where the tuberculosis problem has always been most acute. The records of the industrial department of the Metropolitan Life Insurance Co. show that among white persons holding industrial policies for all ages from 1 to 74 the decline was greater than in the general population. However, this does not hold true for all age periods as higher rates prevail among the wage-earning group between the ages 20 and 54. More than one-half of all the deaths from tuberculosis among the workers occur between ages 20 and 45, and in this age range the mortality from the disease is still high (p. 48).

An infective form of jaundice, with a high mortality rate, occurring among Scotch miners working in wet coal mines has been shown, by an experimental study by the British Medical Research Council, to be caused by rats having a spirochætal infection. This epidemic form of jaundice occurred among soldiers in the trenches during the war and there have been reports of repeated outbreaks of the disease in the United States since 1857. The study indicated that infection occurs in most cases through abrasions of the skin or by way of the eye or the nasal mucosa, from contaminated hands, while infection by ingestion seems to be a less probable mode of entrance of the infective organism (p. 54).

The practice of a railroad's contracting out its maintenance work at a higher cost than would be incurred if the work were done by the regular maintenance force of the carrier was condemned in a recent decision by the Interstate Commerce Commission. The commission found that the practice "can not be regarded as consistent with efficient and economical management" (p. 27).

Cooperative gasoline and oil stations are a comparatively new phase of the cooperative movement in this country. Their development has taken place mainly in the three States of Illinois, Nebraska, and Minnesota. In each of these States the local associations pool their orders and the buying is done through a State-wide organization. During 1927 the central organizations bought for their local associations more than 1,000 carloads of gasoline and kerosene (p. 93).

Every State legislature which convened in regular session in 1927 passed legislation of interest to labor. The New York eight-hour law for females is of particular importance. The outline of labor legislation on page 82 gives an idea of the types and number of acts passed during the year.

Some of the most confusing questions in the development of workmen's compensation are found in the application of the workmen's compensation acts where the laws or jurisdiction of two or more States are apparently in conflict. An interesting analysis of this subject is presented in an article on page 56.

Employment conditions in Europe, as a whole, were considerably better at the end of 1927 than they had been at the end of either 1925 or 1926. The principal exception was Italy, where the number of unemployed has increased sharply during the past two years. In Germany, conditions were notably better and in England the improvement over 1926 was quite marked (p. 24).

IN MEMORIAM

Mr. Charles H. Verrill, a member of United States Employees' Compensation Commission, and for many years a statistician in the Bureau of Labor Statistics, died suddenly on January 19, 1928.

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Use of Cost-of-Living Figures in Wage Adjustments

By ETHELBERT STEWART, UNITED STATES COMMISSIONER OF LABOR STATISTICS

THE data regarding family expenditures on which the Bureau of Labor Statistics bases its reports on cost of living were secured as the result of a family-budget study made in 1918. Over 12,000 families were visited and information was secured as to the quantity of the different items purchased, as well as the cost at that time. In other words the details of family expenditure based upon the standard of living that obtained in 1918 were secured from this number of families in 92 localities.

It is the quantities consumed by the average family as determined by this survey that constitute the base of the bureau's present cost-of-living reporting system. These quantities are what we call "weights." Every six months, in June and December, the price of each of the items is ascertained and that price is multiplied by the quantity of that particular item which an average family used in 1918. These weighted prices are then added, and the relation of the total to the total of the same items in 1914 constitutes our index.

If it is assumed that the standard of living of the workers' families to-day is just what it was in 1918 then the bureau's cost-of-living index is substantially accurate. It must, however, be apparent to every person that the standard of living to-day is not what it was 10 years ago, and that to make the bureau's cost-of-living index square with the present situation an entirely new survey should be made to provide the bureau with a new weighting system. Many things were left out of the survey of 1918 which to-day are common to almost every household. Automobiles, radios, and electrical appliances other than electric lights have become so common that they should not be ignored. The effect of installment buying on standards of living can be determined only by a survey.

The importance of keeping up this material and keeping it reasonably abreast of the times is emphasized by the large and varied uses to which it has been put. In the present article an attempt has been made to bring together the more striking illustrations of this use. Another element, however, which does not appear in the following pages should not be forgotten. The workers constitute probably 90 per cent of the market of the American producer and the American merchant. What does this 90 per cent buy and how much of each

item that goes into the family budget does the average family buy? This can be ascertained only by a survey which, by placing the emphasis on the quantities consumed, really develops the facts.

A study of the use of cost-of-living figures in wage adjustments was published by the Bureau of Labor Statistics in 1925. (Bul. No. 369.) This study brought the story down to the beginning of 1924. The following abstract from that bulletin shows the extraordinarily widespread use of cost-of-living figures in wage adjustments, not only during the war but also during subsequent years:

The cost of living has entered as a factor into practically every award made by Government arbitration boards. It also has been considered by State and municipal agencies, and by State arbitration boards, and has been the controlling factor in the fixing of wages by minimum wage boards in 13 States and the District of Columbia. In the last 10 years it has entered into practically every industrial case which was voluntarily arbitrated. During the war, plans involving the use of cost-of-living figures were adopted by a great many private employers, and while some of these have been abandoned, others are still in effect. Since the war many other firms have adopted definite plans for the payment of wages, all of which provide for the consideration of figures showing changes in the cost of living.

It is impossible to estimate the number of employees affected by adjustments based on changes in the cost of living. The awards of Federal arbitration boards involved directly about 747,000 employees in the coal industry;¹ 100,000 employees in the packing industry;² 500 employees in the shipping industry;³ and 2,000,000 employees on railroads.⁴ In addition the awards of the National War Labor Board affected 711,500 employees in various industries.⁵

Since 1922, all commissioned officers, below certain ranks, in the Army, Navy, Marine Corps, Coast Guard, Coast and Geodetic Survey, and Public Health Service, have their subsistence and rent allowances determined by changes in the cost-of-living figures of the United States Bureau of Labor Statistics. This affects directly about 16,000 men.⁶

No attempt is made to estimate the number of employees whose wages have been affected by the use of cost-of-living figures by municipal agencies, State arbitration boards, or minimum wage boards, because the records are not sufficiently complete. Neither are data available upon which to base an estimate of the number of those affected by the voluntary industrial arbitration awards referred to. In the book and job printing industry of New York City alone, the wages of approximately 22,000 employees were involved. In Chicago, in the same industry, the number of employees affected was between 9,000 and 10,000. The awards of the Council on Industrial Relations for the Electrical Construction Industry affect about 150,000 men. It has been shown that private employers engaged in various businesses have also utilized extensively cost-of-living figures.

Altogether, the number of employees affected directly by specific wage adjustments is very great; those industries alone where the approximate number is known employ over five and one-half million workers. It should also be borne in mind that in many instances an even greater number of employees is affected indirectly, for often other employers engaged in the same character of work voluntarily make changes in wages, to conform to those fixed by an adjustment agency or granted by other employers. Therefore practically all labor has been affected either directly or indirectly by adjustments which were based in some measure upon the cost of living.

Since the date of preparation of Bulletin No. 369, namely, the beginning of 1924, the bureau has made no survey of the subject. Enough information, however, is at hand to show that the use of cost-of-living data in wage adjustments by governmental boards,

¹ U. S. Coal Commission, Report on Anthracite, July 5, 1923, p. 6; and The bituminous mine workers and their homes, Sept. 22, 1923, p. 1.

² United States. President's Mediation Commission. Report. Washington, 1918, p. 15.

³ Journal of Political Economy, March, 1919, p. 147.

⁴ U. S. Railroad Labor Board. Decision No. 2, p. 5.

⁵ U. S. Bureau of Labor Statistics, Bul. No. 287, p. 19.

⁶ U. S. Congress. Special Committee on Readjustment of Service Pay. Hearings. 67th Cong., 2d sess. Washington, 1921, pp. 25-29, 150, 151, 381, 423, 456.

arbitration boards, and private contract has continued down to the present time, modified only by the fact that the past two or three years have been years of relatively few wage controversies of sufficient intensity to bring them to the attention of the public.

The following citations, therefore, of the recent use of cost-of-living figures in wage adjustments represent only such examples as have come to the attention of the bureau without special inquiry or research.

Railroad Arbitrations Under the Federal Act of 1926

THE Railroad Labor Board, during its life of six years from 1920 to 1926, used the cost-of-living indexes as computed by the United States Bureau of Labor Statistics in all its wage decisions, the law specifically providing that it should give consideration, among other factors, to "the relation between wages and the cost of living."

The mediation and arbitration boards established under the new railway labor act of 1926 have no definite rules of procedure established by law, but a review of the hearings and awards in all of the numerous arbitration cases held under the act shows that data regarding changes in the cost of living have been given constant consideration by the parties concerned. Such figures were used in the arbitrations between the Brotherhood of Locomotive Firemen and Enginemen and the southwestern and western railroads; between the Brotherhood of Railway and Steamship Clerks and the Chicago & North Western Railroad, the American Express Co., the Boston & Maine Railroad, the New York Central Railroad, and the Southern Railway Co.; between the Brotherhood of Railroad Signalmen and the Southern Pacific Railway Co.; between the organizations of conductors and trainmen and the western railroads; between the Brotherhood of Railway Maintenance of Way Men and the Louisville & Nashville Railroad; and in other cases. The cases cited involved more than 200,000 men. In a great many other instances, also, voluntary settlements were made between the men and the carriers on the basis of awards made in the above cases.

Colorado Industrial Commission

IN 1915 the Legislature of Colorado passed what is commonly known as the industrial relations act, effective August 1, 1915, which created the industrial commission. This act requires employers and employees to give each other and the commission 30 days' notice of an intended change affecting the condition of employment with respect to wages and hours; gives the commission power to mediate and investigate and hold hearings on the controversies or demands; and prohibits any change or stoppage of work during the 30-day period, or while the commission is holding its hearings or investigation. The findings of the commission become final if the parties agree to accept the commission as arbitrator; otherwise the findings are merely recommendatory.

Up to December 1, 1924 (the latest date for which figures have been compiled), the commission had handled 1,157 controversies involving approximately 150,000 workers.⁷ In the findings of the

⁷See Journal of Political Economy, October, 1927.

commission various factors were, of course, recognized, but the matter of changes in the cost of living seem to have been of most importance. The former chairman of the commission, Hiram E. Hilt, has stated, indeed, that "all wage changes are based primarily on the cost of living."⁸ The cost-of-living index figures used by the commission are printed in the reports of the commission.⁹

Minimum Wage Boards

PRIOR to the decision of the United States Supreme Court adversely affecting the constitutionality of mandatory minimum wage laws for women, such laws were in operation in 13 States and the District of Columbia. Most of the minimum wage commissions or minimum wage boards connected therewith investigated the actual earnings and expenditures of women as a preliminary to fixing a "living wage." These agencies on the basis of their investigations then formulated budgets which were considered equivalent to a minimum cost of living for the workers concerned or applied to budgets already accepted the per cent of change in the cost of living.¹⁰

In 1919 at a joint conference of representatives of the California, Oregon, and Washington commissions, it was recommended that, as few States had funds adequate to make complete investigations of the cost of living, the figures of the United States Bureau of Labor Statistics, published in the Labor Review, should be used by the wage conferences in all States.¹¹

The decisions of the United States Supreme Court as to the unconstitutionality of the District of Columbia and Arizona minimum wage laws have no doubt affected the operation of other acts as regards women, although they are apparently unaffected as regards minors. The Massachusetts law, however, is nonmandatory and under it wage boards have continued to adopt budgets and also to revise previous budgets after a consideration of the changes in cost of living.¹² At the close of 1926 wage boards had been called in Massachusetts for 21 occupational groups, employing probably 85,000 females.¹³

State and Municipal Agencies

DURING and immediately after the war cost-of-living figures were used in the adjustment of the salaries of State and municipal employees in various jurisdictions. These are described in Bulletin No. 369 (p. 97). At least one of these cities—St. Paul, Minn.—accepted this principle as permanent. For the other jurisdictions the bureau has no recent information.

Cost-of-living figures were first used in St. Paul in the adjustment of wages in 1918. The civil service bureau of the city at that time secured from the city council an increase for certain classes of these employees on this basis, and in October, 1922, the city council approved a plan submitted by the civil service bureau whereby all

⁸ U. S. Bureau of Labor Statistics Bul. No. 369, p. 132.

⁹ See, for example, report for 1924 to 1926, p. 49.

¹⁰ U. S. Bureau of Labor Statistics Bul. No. 369, pp. 156-158.

¹¹ *Idem*, p. 158.

¹² Massachusetts. Department of Labor and Industries. Annual reports, 1925 (pp. 26, 27) and 1926 (pp. 28, 30).

¹³ National Industrial Conference Board. Minimum wage legislation in Massachusetts. New York, 1927, p. 197.

city employees, with the exception of teachers, were grouped into three services—graded, ungraded, and common labor. Standard basic salaries were established for the different grades of workers under these classifications, which have been adjusted annually since that time to the rise and fall in the cost of living as determined by the periodic cost-of-living surveys made by the United States Bureau of Labor Statistics.¹⁴

The number of employees in St. Paul subject to the periodic wage adjustments was approximately 2,330 in 1925.¹⁵

In discussing the necessity for a periodic adjustment of wages the civil service bureau stated in its report of 1922 that "the measure of the wage ought to be its purchasing power, and when this purchasing power changes the measure of the wage should change to correspond. Consequently, an equitable standardization, if not made adjustable to the cost of living, becomes merely a temporary truce in the economic struggle between the employer and the employee."

Agreements between Employers and Employees

MANY collective agreements between employers and their employees provide for arbitration in case a new agreement can not be negotiated at the expiration of the old one, and in the resultant arbitrations cost-of-living figures almost invariably play an important rôle. In addition, collective agreements sometimes provide specifically for the revision of the agreed wage rates to meet any important change in the cost of living, and would be practically inoperative without current statistics of changes in cost of living of sufficient accuracy and authoritativeness to be acceptable to the parties concerned.

An example of this latter type of agreement is that made between the International Ladies' Garment Workers' Union and employers of Cleveland, Ohio, under date of January 1, 1924, Article III of that agreement providing:

On or about October 1 of each year, the referees shall take up the matter of wage scales, and on or about November 1 shall make such changes in the then existing scale as shall, in their judgment, seem advisable. The wage scale thus promulgated by them shall be effective at a time to be fixed by the referees which shall not be prior to December 1 of that year, and shall be the scale in force for the year next ensuing, except that four months thereafter, the subject may be reopened for the purpose of making adjustments in conformity with the changes in cost of living, which adjustments shall be made on or about April 1, and become effective at a date to be fixed by the referees, which date shall not be prior to May 1.

Industrial Arbitration Boards

IN ADDITION to the railroads, arbitration as a method of settling disputes is very frequently resorted to in all types of industries, and almost no arbitration case can avoid cost of living as one of the important factors to be considered in arriving at a just decision. In the majority of cases in which arbitration is resorted to, its use is only occasional and probably a large number of these cases do not come to the attention of the Bureau of Labor Statistics.

¹⁴ Letter from Civil Service Bureau, St. Paul, Dec. 27, 1927.

¹⁵ St. Paul. Civil Service Bureau. Twelfth annual report, 1925.

In certain industries, however, permanent arbitration machinery on a national scale has been voluntarily established. Cases which can not be adjusted by the parties are referred to local boards of arbitration and, failing adjustment there, to a national board. This is true of the printing industry and the electrical construction industry. Local arbitration boards have also been established in other industries such as the building industry in San Francisco, the cloth hat and cap industry in New York and Chicago, the clothing industry in Baltimore, Chicago, Cleveland, and Rochester, and in the silk ribbon, fancy leather goods, shirt, and boys' waist industries in New York.

In practically all cases voluntarily referred to arbitration the cost of living is considered as a factor, though one of varying weight. In the decisions of some of the arbitration boards the cost of living has exercised the controlling influence, and some decisions have been based entirely upon this ground.

Street-railway industry.—The principle of arbitration in wage cases where the parties can not agree has long been accepted in the street-railway industry. In a long series of arbitrations in this industry the cost of living has been prominent in the findings of the arbitrator.

Recent cases in this industry in which data on the changes in cost of living of the wage earners have figured prominently include those between the Worcester Consolidated Street Railway Co. and its Springfield employees; the Boston Elevated Railway Co. and its employees; the Shreveport (La.) Railways Co. and its men; the United Electric Railways Co. and its employees at Providence, R. I.; the Northern Ohio Traction & Light Co. and its workers; street-railway companies of East St. Louis, Alton, Granite, etc., and their men; traction companies of San Francisco and Oakland and their workers; and the Connecticut Co. and its employees.

Printing trades.—The printing trades, especially in the newspaper publishing branch of the industry, rival the street-railway industry in their adherence to the principle of arbitration, and in nearly all such cases of arbitration the cost of living holds an important place. In such cases, of course, it is essential that cost of living data be as accurate as possible, and quite generally those of the Bureau of Labor Statistics are used, not only by the parties involved, but by the arbitration board itself. The bureau's figures were stated, in the arbitration case between the Washington Newspaper Publishers' Association and Typographical Union No. 101, to be "undoubtedly the best statistics available." The shortcomings of even these figures are, however, often pointed out. Thus, the need of more detailed figures is sometimes expressed, as in the arbitration proceedings between the International Joint Board of American Newspaper Publishers' Association and the International Typographical Union, where the arbitration board stated:

There is a pressing need for such index numbers as will measure differences in living costs between geographical unions, but until this is done, it seems unwise to hold the Denver printers to a weekly scale which is greatly less than those enjoyed by their fellow workmen in other cities.

Again, changes that have taken place in the standard of living are constantly being pointed out in arbitration proceedings, and both

parties and the arbitrator are handicapped by the lack of figures showing present-day standards. It is admitted that the income of the family is expended in quite different proportions and for quite different things than was that of the families included in the Bureau of Labor Statistics' 1918 study, and arbitrators have to take this into consideration in their awards.

Individual Companies

IN 1921-22 the Bureau of Labor Statistics arranged for the sending out of questionnaires to 7,000 employers, asking them if they used cost-of-living figures in the adjustment of the wages of their employees. Of the 2,311 replies received from employers, 1,370, or about 60 per cent, stated that they did make use of cost-of-living figures when making wage changes, something over one and a half million employees being affected. In some cases the employers computed their own cost-of-living data, but in most cases use was made of the figures compiled by existing agencies such as the United States Bureau of Labor Statistics. Details regarding these plans are given in Bulletin No. 369.

The bureau has not been able to keep in touch with these establishments to determine to what extent these plants have continued to use cost-of-living figures. There is, however, no reason to suppose that the practice is not still a common one, and this is indicated by recent correspondence received by the bureau. A few selections from this correspondence may be cited:

Letter from one of the largest oil companies in the United States, dated July 12, 1927

I am very much disturbed to learn from the announcement in the United States Daily that there is a possibility that your department may be obliged to abandon the compilation and publication of the cost-of-living statistics. Our wage agreements, as you know, are influenced very largely by these statistics, and I am writing to express the hope that this compilation will not be abandoned.

Letter from one of the largest railroad companies, dated July 14, 1927

Referring to the attached, I regretted to note recently from a statement by you that there is some danger of your computation of the cost of living being discontinued. I sincerely trust that this danger will not be realized in fact. Can you let me know what the probabilities are in this connection?

Letter from a large manufacturing company, dated May 5, 1925

Approximately two years ago this company adopted the principle of adjusting its wages in accordance with the index figure given by your department for the cost of living in Philadelphia, which figure was furnished us by the Bureau of Labor Statistics every three months. This being approximately the time for an adjusting figure we took the matter up with Mr. Stewart, Commissioner of Labor Statistics, and have been informed by him that the funds at his disposal are insufficient to make these reports quarterly and that they will be made only twice a year.

This information is very disturbing to us because wage adjustments made once in six months can not be satisfactory adjustments, for changes in cost of living fluctuate so rapidly that adjustments made only twice a year are for a large period of time either unfair to the employee or to the employer.

I understand that similar wage adjustments are made to more than 750,000 employees in the United States based on your previous quarterly return. If the other establishments have met with the degree of satisfaction in the use of this method of making wage adjustments as we did, we think that they will share with us sincere regrets in your change in making these reports from quarterly to semiannually, for the reason that I state above.

Letter from representative of several of the largest railroad labor organizations, dated January 14, 1926

During the past 15 years and more, since the train and engine service employees of the railroads of the United States began their concerted wage movements, they have depended almost entirely upon statistics of the Bureau of Labor Statistics of the Department of Labor to indicate the increase or decrease in the cost of living and the increase or decrease in the purchasing power of the dollar. As we enter upon another wage movement of this kind we find these statistics have been considerably curtailed and we are at the present writing unable to secure important data which we have depended upon heretofore. Our understanding is that this curtailment is one of the effects of the administration's economy program, which has resulted in cutting down the funds of the Bureau of Labor Statistics for the collection, compilation, and publication of this information.

From the point of view of the economic welfare of the railway employees, as affected by their presentation of the facts upon which their wage movement is based, in part, I feel this curtailment is not only greatly to be regretted but is also likely to result in seriously impairing the ability of the employees to present this very important data in case the pending wage movements result in arbitration proceedings.

Employers' Association

THE National Industrial Conference Board has been issuing, for several years, a monthly index of cost of living primarily for the use of its own members. This index number is based partly upon original investigations by the board, but for retail food prices, the largest item in the workers' budget, it uses the data of the United States Bureau of Labor Statistics. Also, the board depends upon the Bureau of Labor Statistics for the weighting system used in compiling cost-of-living index numbers. The board is, therefore, very much interested in the accuracy of the weighting system and, in a recent communication to the Bureau of Labor Statistics, expresses the hope that the bureau will be able to make a new budgetary study for this purpose. The following is an extract from the letter referred to:

All of us who work with cost-of-living data agree, of course, as to the unsatisfactory character of the basic budget since standards of consumption have changed so greatly, and some of us entertain the hope that the Bureau of Labor Statistics might at some time undertake a new budgetary investigation.

The National Industrial Conference Board is an association of a large number of important employers' organizations.

American Trade-Unions and the Problem of Unemployment

THE problem of unemployment is one with which labor organizations are continually confronted, in varying degree. In well-organized trades where the flow of work is more or less even, unemployment may be a very minor factor. In seasonal industries, however, especially in trades or industries where the average labor force exceeds the average supply of work, the matter is one for serious consideration. The mining industry and the clothing trades are well-known examples of the latter situation.

Measures which may be taken to solve the problem are (1) those tending to prevent the occurrence of unemployment, and (2) those taken to alleviate the effects of unemployment when it occurs.

As to the prevention of unemployment, labor organizations are handicapped by the fact that unemployment is largely the result of conditions quite outside the control of the workers. They have, however, tackled the problem as best they could by various means, largely from the point of view that the supply of work is a fixed amount. They have endeavored, therefore, to conserve and "stretch" this work supply in some or all of the following ways: By limiting the numbers among whom the work must be divided (i. e., by limiting the number of new members admitted to membership in the union and by limiting the number of apprentices); by insisting on the principle of the "worker's right to his job" and requiring an indemnity in case of his dismissal; by demanding the "rationing" of the work available among the full working force, instead of permitting the dismissal of unneeded workers and allowing the remainder to work full time; by limiting or prohibiting the working of overtime.

When, nevertheless, a union member finds himself out of a job he can rely upon his union to do its best to find him another. Few international unions maintain regular employment offices, but there is hardly a local which does not have some person in touch with conditions and opportunities in the trade. In some cases also a regular office is maintained whose sole business it is to find work for its jobless members. Many unions, indeed, specify in their agreements with the employers that the latter must apply to the union for men to fill any labor requirements.

For persons out of employment through no fault of their own their organizations make provision in several ways, such as the payment of out-of-work benefits, loans, or "relief." Only three international unions are known to be paying unemployment benefits at present, though a great many have done so at one time or another and many local unions still pay such benefits. A great many unions exempt jobless members from the payment of dues during the period of idleness, the sum so "excused" amounting to many thousands of dollars a year. Loans to needy unemployed members are made by at least two national labor organizations.

Notwithstanding the apparently slight assistance given by trade-unions to their members, organized workers who are out of a job have an advantage over nonunionists in a similar situation, for, as one investigator put it, "there is scarcely one American local union which does not in some form or other contribute toward the support of its unemployed members when they are in need of assistance."

A member out of work is rarely turned away from the union without receiving some assistance. In some cases it may take the form of a loan of a few dollars, but his union will rarely allow him to suffer from want. The usual procedure is for a friend of the unemployed to announce at a meeting of the local union that a brother member is unemployed and in need of money to pay the rent and secure the necessities of life. With scarcely any further remarks, the union votes to donate a sum of money to the member. In other cases the local union sets aside a certain sum of money for the relief of the unemployed, and appoints a committee which has complete control over the granting of aid.¹

The effectiveness of even these incomplete measures is attested to by the fact, brought out by a survey made by the American Association for Labor Legislation,² that few trade-unionists have to resort

¹ Smelser, D. P.: *Unemployment and American Trade-Unions*. Baltimore, Johns Hopkins Press, 1919, p. 148.

² *American Labor Legislation Review*, November, 1915, p. 589.

to charity in periods of idleness. Social workers in various places have testified to this, and the United States Commission on Industrial Relations in its final report stated that "trade-union members are practically never found among the applicants for charity during periods of unemployment."³

The unions in some industries especially subject to the evil of unemployment have realized their inability to cope with the situation alone and have succeeded in obtaining, by collective bargaining with the employers, an unemployment insurance system, with the idea, first, of making the industry responsible for the unemployment of the regular workers within it, and second, of providing employers with an incentive for stabilizing the employment in their plants. Plans providing either for unemployment insurance or a guaranteed period of employment have been tried in one or more markets of the women's garment industry, the men's clothing industry, the cloth hat and cap industry, the felt-hat industry, and the wall-paper industry. Only a few such plans are now in operation, but where such schemes have been suspended this has not been because of dissatisfaction with the plan but because of factional difficulties within the union. The consensus as regards these plans appears to be that while unemployment insurance has not resulted in decreasing unemployment, it has been of incalculable benefit in alleviating the distress attendant upon it.

Measures for the Prevention of Unemployment

Restriction of Membership

ONE of the ways by which trade-unions have tried to prevent unemployment among their members is the restriction of the membership of the union, on the theory that the work available in the industry should be secured to the workers already in membership. In trades where seasonal fluctuation of demand for the product has made necessary the creation of a reserve labor force sufficient to handle the orders at their peak, in trades where business depression has resulted in the lay-off of numbers of workers, and in trades where increased use of machinery or the introduction of improved machinery or methods is steadily reducing the number of men necessary to turn out the product—in those trades the unions at such times often take the stand that there is no use aggravating, by the admission of additional workers, a labor situation already bad.

The Cedar Rapids (Iowa) Local No. 26 of the Sheet Metal Workers' International Union states as its policy in this regard that "no applications for new members will be accepted while members of this union are out of employment."

Indemnity for Loss of Job

Cases are even on record where workers already in membership with the union have been given inducements to leave an industry which was overmanned. This has occurred in three instances in the men's clothing industry. Three firms, one in Chicago and two in New York City, found it necessary to cut their regular force. The Chicago firm had introduced new methods which, by increasing the

³ U. S. Commission on Industrial Relations. Final report, p. 175.

output per man, did away with the jobs of 150 cutters. Representations by the union, the Amalgamated Clothing Workers, resulted in the firm's conceding the justice of remunerating the workers who thus found themselves out of work through no fault of their own. The firm contributed \$50,000, and \$25,000 was added from the unemployment insurance fund of the industry. From the money so obtained each man who was dismissed received an "indemnity" for the loss of his job amounting to \$500, with the understanding that he was to leave the industry altogether and go into some other line of work. At the headquarters of the union it was stated that this may be adopted as a definite policy of the organization. Although the industry is turning out more product than ever before, decreased labor forces are required, due to the increased output per worker owing to new methods and machinery, and the union, therefore, recognizing this situation, is endeavoring to reduce the number of workers in the industry.

In New York City, one firm found it could give full-time employment to only 300 of its regular force of 380. As the union saw the situation, matters stood thus: "It was necessary either to discharge a portion of the workers, or to divide the available work among all the workers. Adoption of the second choice would have meant two things: It would have placed all the workers on a part-time basis, interfered with smooth production, and possibly placed the firm in a position where it might have chosen to close its factory altogether. It is quite obvious that * * * it was preferable from the point of view of the workers themselves to agree to the elimination of 80 workers, rather than jeopardize the jobs of the remaining 300 workers as well. This was the wiser course because while it is possible to find new jobs for the 80 eliminated workers, it would be a much more difficult task to find jobs for all the 380 workers if the firm were to decide to close its factory." For this reason the union agreed to the elimination of these 80 workers, provided some financial provision was made for them. It is explained that this was done for two reasons: "Provisions by the firm for the discharged workers would not only contribute to a fund to take care of them financially until new jobs could be found, but would also establish the principle of employers' responsibility to the workers." The firm advanced \$3,000 and the workers still in employment in the shop each contributed two days' earnings. A committee was chosen, from among the men who were dismissed, to decide how the indemnity money should be distributed. It was decided that the distribution should be upon the basis of the financial need of each but within the limits of \$50 as a minimum and \$200 as a maximum.

The second New York firm had to dismiss 25 employees. It donated \$500, the workers who remained also contributed, and the discharged workers received an indemnity of \$120.58 apiece.

Regulation of Number of Apprentices

Limitation of apprentices is another means of controlling the labor supply, and this has been quite generally resorted to by labor organizations. Many unions have strict rules regarding the proportion of apprentices to journeymen, the age at which the learner shall be admitted to apprenticeship, the period of training, and the general

conditions under which his training shall be conducted. Surveys by the Bureau of Labor Statistics and by other agencies interested in the subject indicate, however, that the scarcity of apprentices in American industry at present is due not so much to union restrictions as to the general disinterest and indifference of employers; and that, because of the cost of training and the effort involved, many employers do not want to be bothered with inexperienced workers and do not avail themselves even of the number of apprentices allowed by the union rules.⁴

Distribution of Work Available

A common union policy is that of equal distribution of what work is available, among the regular working force. This is usually embodied in the collective agreement, various means of securing equitable division of work being provided for.

Often the principle is stated only in general terms, such as "there shall be equal division of work among all the workers of the shop at all times." Some of the local agreements of the headgear workers' international union provide that arrangements for this equal division shall be worked out by the employer and a workers' committee. The agreement of the tailors' local of Grand Rapids, Mich., specifies that "All workers who are employed in the busy season shall be employed also in the slack season and all work is to be equally divided"; the same provision is made in the agreement for Chicago.

If it becomes necessary to reduce the force, the union may require that this shall be done by laying off the workers in rotation for a few days or a week at a time. Many bakers' agreements contain this clause, as do also the 1926 agreements of the coopers' local of Milwaukee, the brewery workers' local of Duluth, Minn., etc. The machinists' local of Marion, Ill., in its 1926 agreement provided for a system of seniority when lay-offs became necessary, the man last taken on being the first to be dismissed. The same requirement occurs in the agreement of Chicago Typographical Union Local No. 16 with the newspaper publishers. The blacksmiths' local of Jersey City specified in its 1926 agreement that when costs have to be reduced "there shall be no reduction in the schedule of hours; the working time, however, will be equally divided amongst the men by working at alternate periods."

The agreement of the American Federation of Railroad Workers with the Pittsburgh & Lake Erie Railroad, covering employees in the car department, provides that "When it becomes necessary to reduce expenses the hours may be reduced to 40 per week before reducing the force. When the force is reduced, seniority * * * will govern, the men affected to take the rate of the job to which they are assigned."

Following the policy of the upholstery workers' union so to divide the work at hand as to insure all a fair share, early in 1926 when the slack season began the shop committee in one plant took up with the firm the question of equal division of work. A plan was worked out jointly, for application only in dull periods, by which a 40-hour

⁴ See Labor Review, issues of January, 1925 (pp. 1-7); July, 1925 (pp. 180, 181); December, 1925 (pp. 6, 7); and May, 1926 (pp. 115-117); also Bureau of Labor Statistics Bul. No. 459.

week was established and the men were divided into two sets, each working 20 hours. All wages earned were pooled and divided equally at the end of the week. The plan is stated to have worked out satisfactorily, "assuring all men in the shop, irrespective of earning capacity, an equal income in a period when some of the men ordinarily found themselves completely unemployed."

A novel plan was adopted during the summer of 1927 by Press Assistants' Local No. 23, New York City, based, as was explained, upon the theory that "every member of a local union is entitled to a fair opportunity to enjoy whatever proportionate measure of employment that the industry might provide." The summer is the dull season in the printing trades, and the measure was adopted, with the cooperation of the employers, to tide over this dull season. Each day man was required to lay off 1 day in every 20 days, and each night man 1 night in every 18, his place being filled by a member out of employment. It was hoped, by this plan, to provide the unemployed with two or three days' work a week. Shop chairmen were given supervision of the working out of the scheme and of arranging for the rotation of lay-offs. They were cautioned to arrange the days off so as to "cause the least inconvenience to employers and to the efficient and effective running of the shop." The measure was an experiment, but the union officials express themselves as pleased with the results and state that it may be adopted as a general policy of the union, inasmuch as, due to the improved machinery and the reduction in numbers of men required to operate it, unemployment in the trade is increasing. The union has already ceased to admit new members on this account.

Limitation of Overtime

The working of overtime is either limited, prohibited altogether, or penalized by requiring compensation at increased rates. Some unions allow no overtime unless permission is given by union officials. The laws of the International Typographical Union provide that any man who has accumulated overtime amounting to a full day must take a day off and thus make room for a substitute. In order to relieve the employment situation, the New York local of millinery workers in 1927 "decided to prohibit all overtime work and to allow no changing of jobs without the permission of the office. To be sure, these decisions had to be modified in some cases to meet special situations which made overtime work absolutely indispensable in certain shops. But in general these rules were enforced and helped to supply jobs to some of our unemployed members."

Finding Jobs for Members

Most local unions regard as one of their accepted duties that of finding employment for members who are out of work. Where the closed shop or preferential union shop has been secured, agreements with union employers usually specify that in cases where additional workers are needed, application for these must first be made to the union. If it is unable to supply workers, help may be obtained elsewhere. Generally the union has no formal machinery for this service, as the business agent, familiar with the capabilities of the men and the requirements of the various shops, can supply the workers.

Regular employment bureaus have been set up by only a few national or international unions. Since 1915 the Brotherhood of Railroad Trainmen has operated in Chicago an employment office for the benefit of its members in securing work in train and yard service. The Order of Railroad Telegraphers six years ago established an employment exchange which, according to the president's report submitted at the 1927 convention of the order, has been successful and has served "an economic need." General and local officers of the subordinate divisions cooperate with the office by notifying it of vacancies on their roads, and at intervals a general employment survey is made through these officers. The president's report states:

Railroads generally during the past three years have been instituting economies such as the automatic block, automatic towers and other devices, and these features, together with a program of rigid economy, have tended to steadily reduce forces in our class of service. This condition has given our bureau an unusual opportunity to render a maximum of benefit to those thrown out of employment.

The experience of the bureau of over six years of operation has worked out efficient methods for effecting placements. The bureau is looked upon with favor by many railroad officials. Some roads we have served so well permit us to request transportation for applicants when needing additional force and depend entirely upon our integrity to avoid misuse of their confidence; while other roads give our bureau the first opportunity to fill their need of additional employees. Each year has added to the prestige of the bureau, which we are conducting at all times to secure the maximum of results by conforming carefully to the standards established by the various roads who apply to us for competent and acceptable men.

During the past three-year period it is estimated that approximately 3,000 applicants have filed requests for assistance, and approximately 1,100 actual placements have been effected. In addition to this aid we have used the columns of the Railroad Telegrapher at peak periods to give general information of railroads needing employees, but on which we have no check of the benefits to our craft through this medium.

The International Pocketbook Workers' Union, though a young organization, established only since 1923, has for some time operated a labor bureau. Employers having agreements with the union apply here for additional workers. Reports in the journal of the union indicate that the bureau has been a success and through its experience is enabled to "place the right worker in the right position. Thousands of our members have availed themselves of our labor bureau * * *." During 1926, more than 13,000 members were sent to positions. The manager of the joint board of the union points out in this connection that of course a great many of these obtained only a few days' work and then again had recourse to the employment bureau. However, "it is safe to say that 25 per cent of the workers of our union hold their positions fairly permanently. About 25 per cent change their jobs about once a year and the rest make several changes during the year."

The International Printing Pressmen and Assistants' Union by its constitution requires each subordinate union to transmit to the headquarters of the international each month a report showing the condition of the trade in that locality, the number of members unemployed, the number on short time, etc. Any information desired by a local or any of its members as to the state of the labor market can be obtained from the employment information office maintained at headquarters.

A similar information service is maintained by the Brotherhood of Locomotive Engineers.

Officers and members of the subordinate lodges of the Brotherhood of Locomotive Firemen and Enginemen are required "to use their influence to secure positions for unemployed members, and whenever places can be found or vacancies occur" they must report these to the employment bureau of the international office.

Employment offices are maintained by the Amalgamated Clothing Workers in the main men's clothing centers. The union regards its management of the employment problem as "the most spectacular administrative advance made by the union since 1920."⁵ Prior to the advent of the union, "hiring and firing was in a confused and disorganized state. Jobs were obtained through pull and, sometimes, bribery. Women occupied a position that can be described moderately as unpleasant. The whole affair was one of favoritism and discrimination." When the union took over the placement work, "favoritism and discrimination were eliminated. The grosser evils were brought under control." But the administrative methods left much to be desired. In 1922, however, an employment expert was hired and placed in charge of the office in Chicago.

The system was reorganized. A complete plan of registration and placement was put into operation. It worked so effectively that one large clothing manufacturer was able to dispense with his own employment office. Substantial progress was made in dovetailing employment in the two major branches of the industry, the ready made and special order. More accurate reports became available on the state of employment in the market as a whole and in all its branches. Through these reports it became possible to regulate the flow of labor into the industry, not by arbitrary rule but with reference to the known requirements of the industry.⁵

Later the same system was introduced into the Rochester and Montreal markets, in the former of which the union had hitherto been unable to secure from the employers the concession of the preferential shop. Six months after the introduction of the employment exchange on the Chicago pattern, however, "more than 98 per cent of the jobs filled in the Rochester market passed through the union employment exchange."

The experience with the employment offices in New York, also, had not been very satisfactory, owing to the workers' desire for work in "inside shops," in preference to that in the contracting establishments which form a large proportion of the shops in New York. This difficulty has been overcome, however, and the Brooklyn office alone, from November 3, 1926, when it began to function, has filled more positions than were applied for by members, the surplus of jobs being filled from members registered at the Manhattan exchange or from Brooklyn workers who had failed to register at the exchange.

An employment office was established in Cincinnati toward the end of April, 1927.

Other internationals which operate employment offices include those of the brewery and soft-drink workers, granite cutters, lithographers, paper makers, photo-engravers, potters, quarry workers, stove mounters, tunnel and subway workers, and wire weavers.

The International Fur Workers' Union is planning the establishment of an employment bureau as a means of eliminating the com-

⁵ Documentary history of the Amalgamated Clothing Workers of America, 1924 to 1926, pp. 27, 28.

petition of members with each other for jobs and of discouraging the practice of going from shop to shop in search of work, "a condition [which] naturally brings about a state of affairs where the employer tries to cut down wages as much as he possibly can."

Opening New Markets and Increasing Business

The Amalgamated Clothing Workers has not stopped with endeavoring to find jobs for the jobless. It has gone farther and has endeavored to increase the demand for the product of the industry. In Chicago the union has even organized new shops to make ready-made clothes for special-order firms. This it has done "to increase the business of the firm and to lengthen the period of employment for the members of the union." It is stated that the entire project was carried through by the union alone and that the cost of promoting and starting the new shop was reduced to a minimum. New units have also been organized to produce "the so-called cheaper lines, which have brought increased business and greater employment to all the union markets."

Unions in the trades which have adopted the union label try to increase the sales in the trades by constantly urging unionists to buy only union-label goods. This they do through the columns of their own magazine and those of other labor organizations, through holding "union-label meetings," etc. Thus, several months ago the union employees of a New England firm manufacturing sheetings advertised throughout the labor press the fact that the product of this factory was made under the very best union conditions and as such was deserving of the patronage of organized labor, and the collars produced by a unionized collar factory are being so advertised now. Indeed, stores handling only union-label products have been established by unionists in St. Louis, Chicago, and Brooklyn to further the sale of such goods.

Under the plan of union-management cooperation adopted on the Baltimore & Ohio Railroad, through operating economies, improved methods, the elimination of the practice of contracting out of work, etc., the period of employment of the shop crafts which are affected by the arrangement is reported to have been increased an average of two weeks per year. Also, attempts have been made to increase the business of the road, the employees, it is stated, having "on more than one occasion * * * out of their own pockets paid for advertisements soliciting traffic for their railroads."

Somewhat similar action was taken in the Chicago district by the brick and clay workers' union in 1916, when it aided the employers in a widespread advertising campaign by which the sale of bricks was increased by 150,000,000 bricks in that year.

Measures for the Relief of Unemployment

ALTHOUGH trade-unions make every effort to prevent unemployment among their members, there are many factors causing unemployment over which the unions have no control. Seasonal depressions, general economic conditions, bad management, lack of orders, etc., can not be overcome by labor organizations alone.

Unemployment Benefits

Many unions have at some time or other made some provision for extending assistance to members who are out of work, generally through regular unemployment benefits, loans, or "relief." Although regular unemployment benefits are paid by many local unions, the only unions of national scope which the Bureau of Labor Statistics knows to be paying direct unemployment benefits at present are the International Pocketbook Workers' Union, the Diamond Workers' Protective Union, and the International Association of Siderographers. Smelser, in his study, states that although few national unions have adopted a system of direct unemployment benefits, "there is scarcely a union in which there has not been a more or less continuous agitation" for the establishment of such benefits. He expresses the opinion that the scarcity of such benefits is due to (1) the unwillingness of members to pay the increased dues which would be necessary, and (2) "the apparent inadequacy of the administrative agencies of the union to secure a just distribution of the benefit."⁶

The diamond workers' union pays benefits after three weeks of unemployment. A diamond cutter who is unemployed receives a benefit of \$12 for the fourth week of his unemployment and thereafter \$2 a day until he has drawn benefit for 13 weeks, when the benefit ceases. During 1927 out-of-work benefits paid amounted to \$1,742. Since this benefit was established, in 1912, \$139,087 has been disbursed. The secretary states, however, that the payment of unemployment benefits is "a losing game." Because of heavy deficits, the fund has twice had to suspend payments until funds could be accumulated.

The siderographers, a small union of about 80 members, pay a benefit of \$5 a week for 26 weeks a year. Nothing was paid out in out-of-work benefits in 1926, but since this benefit was established, in 1913, payments have aggregated \$1,125.

No separate figures are available for unemployment relief paid by the International Pocketbook Workers' Union; in 1926 payments for unemployment and sickness relief amounted to \$4,046.

Some of the locals of the international unions of bakery workers, wood carvers, photo-engravers, stereotypers, and lithographers pay unemployment benefits. Thus the bakery workers' local of Portland, Oreg., pays an unemployment benefit of \$7 per week. Benefits paid by locals of photo-engravers range from \$12 to \$25 per week, and the period of benefit ranges from 6 to 26 weeks per year; ten locals during 1926-27 paid in benefits more than \$60,000.

The Western Brokers' Division of the Commercial Telegraphers' Union of America, by referendum vote of its members, in the spring of 1927 adopted a plan providing for the assessment upon every member employed at full time of \$1 per week for a period of five weeks, to provide funds for the relief of unemployed members. This applied only to the city of Chicago for the reasons that outside of that city unemployment was not so serious and the scale of wages was "far below the standard wage paid to Chicago members, who are practically 100 per cent organized."

⁶Smelser, D. P.: *Unemployment and American Trade-Unions*. Baltimore, Johns Hopkins Press, 1919, pp. 139, 146.

Exemption from Dues

An indirect form of unemployment benefits is that of excusing an unemployed member from the payment of trade-union dues during the time he is out of a job. This keeps the member in good standing in his union and retains for him his right to any other benefits paid by the organization. Small though this benefit seems, quite considerable sums have been disbursed by international unions in paying unemployed members' dues. Out-of-work stamps issued by the Cigar Makers' International Union last year amounted to \$7,036 and since 1890, when the practice was inaugurated, to \$1,820,777. Until 1927 a member in good standing for 1 year, after he had been out of employment for 1 week, might have his dues exempted for 6 weeks, after which he was ineligible for further benefits for 7 weeks. No member was entitled to more than 18 weeks' stamps in any one year. The 1927 convention of the organization placed the whole transaction on the basis of a loan to be repaid at the rate of 10 per cent of his weekly earnings as soon as he returned to work, and reduced the benefit to 2 months' dues per year. Locals were given permission to establish their own out-of-work funds if they cared to do so. These and other changes made in the constitution by the convention were ratified by a referendum vote by the members.

The International Molders' Union began to issue out-of-work stamps as far back as 1897. Each employed member pays into the out-of-work fund 1 cent per week. Originally no member was entitled to have his dues paid, because of losing his position, for more than 13 weeks each year. In 1917, however, the convention authorized the national executive board to extend the benefits "in the event of an extraordinary depression of long duration." Under this authority extended benefits were granted beginning in January, 1921, and lasting throughout 1921 and 1922; during this period the fund paid out for dues of members \$203,990. The normal restriction was resumed on January 1, 1923. Poor conditions in the trade led to the renewal of extended relief again in July, 1924, continuing for two years and a half and calling for an outlay of \$55,824. Because of "appeals and petitions" from many different localities the executive board announced in July, 1927, the resumption of extended benefits. Its payments for out-of-work stamps from October 1, 1897, to September 30, 1927, have aggregated \$1,447,474.

Other organizations which exempt unemployed members from the payment of dues are those of the blacksmiths, boiler makers, railway carmen, coopers, draftsmen, electrical workers, leather workers, machinists, maintenance-of-way employees, oil-field workers, paper makers, pattern makers, piano and organ workers, metal polishers, stove mounters, and textile workers.

Loans to Members

A number of organizations have at some time or other made a practice of extending loans to members out of work. These were either in the nature of relief or for the purpose of enabling members to go to some other locality where there was a prospect of finding work. Most of such plans have proved unsuccessful and have been

abandoned,⁷ mainly because of the difficulty of collection of unpaid loans, abuse of the borrowing privilege, illegal loans, etc.

The Cigar Makers' International Union has granted traveling loans to unemployed members since 1890. Loans for this purpose in 1926 amounted to \$10,223, and since this practice was inaugurated such loans have aggregated \$1,633,699. No data are available to show to what extent these loans have been repaid. The loan privilege was abolished in 1927.

The International Pocketbook Workers' Union in 1926 made loans to the amount of \$3,761. It is expected that only about 25 per cent of this will be repaid. "In fact, most of the loans in 1926 were given to people as loans merely because we did not want to humiliate them and make them feel that they are getting charity."

Unemployment Insurance Plans

AS A result of collective agreements between employers and unions schemes of unemployment insurance have been set up in various industries. The underlying idea was to make each industry responsible for the employment of its regular workers.

Men's clothing industry.—A preliminary contract between the Amalgamated Clothing Workers and the employers in the Chicago market was signed early in 1923, providing for the creation of a fund to which each employer should contribute 1½ per cent of his weekly pay roll, the employees in the shop contributing a similar amount. Changes in the rates of benefit, administration, and other conditions have been made from time to time,⁸ as conditions revealed the necessity for revision. At present, unemployment benefits are paid at the rate of 30 per cent of full-time wages. Unemployment is calculated on the basis of the total hours of unemployment of each worker, and the payments are regulated by the size of the fund available for benefits, but no worker is eligible for unemployment benefit for more than two and one-half weeks in each half year. Benefits are paid half yearly, at the end of each season, for the unemployment during that season. Only "involuntary unemployment resulting from lack of work" is compensated.

The scheme is administered by boards of trustees, equally representative of both union and employers, with an impartial chairman.

There are two forms of agreement, one of which provides for an individual firm fund and the other for a "pool" for a number of establishments. This is stated to have been done as a compromise between the plan of a pool for the whole Chicago market, advocated by the union, and that of a fund for each individual establishment, advocated by the larger firms. There are about 250 small contracting establishments which have a common fund, 50 nonassociation shops have a second fund, and some 80 of the larger firms each have a fund of their own. There are five boards of trustees, one each for the two largest firms, one for the remaining large concerns, one for the nonassociation houses, and one for the contractors. All have the

⁷Discontinued plans include those of the flint-glass workers, granite cutters, leather workers (horse-goods branch), lithographers, machinists, etc.

⁸For detailed descriptions of the plan and its operation see Labor Review, issues of July, 1924 (pp. 22-30), and November, 1925 (pp. 133, 134); International Labor Review (Geneva), March, 1925 (pp. 318-328); and Bulletin of the Taylor Society, August, 1927 (pp. 471-477).

same chairman. The union representatives are the same for all the boards but the employers' representatives differ from board to board.

The union employment bureau plays an important part in the system, as its records are used to insure accuracy of data on employment. It forwards to the trustees of the funds daily reports of all registrations and assignments, and other data, and through it are paid the checks for benefits.

From the inauguration of the fund, May 1, 1923, to October 8, 1927, contributions to the fund have amounted to \$3,878,956, and benefits have been paid in the amount of \$2,946,965. On October 8, 1927, there was a balance in the fund amounting to \$625,624.

Although the fund has been very successful in alleviating the effects of unemployment on the workers, in the opinion of the chairman of the fund the scheme has had no tendency to decrease unemployment. The agreement contains a clause providing that an employer who has accumulated in the fund an amount sufficient to pay benefits for two years will not be required to pay any further contributions until the fund to his credit is reduced to an amount sufficient to pay benefits for one year. It was originally thought that this would act as an incentive upon employers to stabilize employment in their shops as much as possible in order to secure relief from making contributions. This has not proved to be the case, largely because the savings possible in other ways far outweigh the possible savings in contributions.

The union, however, has repeatedly expressed its satisfaction with the plan and its results, and has announced its intention of endeavoring to extend the plan to the other men's clothing markets. Thus the report of the general executive board of the union to the 1926 convention expressed the following opinion as to the unemployment insurance feature:

The Chicago system of unemployment insurance may be regarded as having passed the experimental stage. It is not likely to encounter soon industrial conditions more unfavorable than those it has already experienced. If not immediately, anyhow the future holds the promise of a stronger fund paying more liberal benefits. In two other places—in the New York market and in the Nash firm in Cincinnati—the union already has agreements for the creation of unemployment funds. Their introduction waits only upon more favorable conditions. It is the policy of the union to extend unemployment insurance finally to all unionized clothing markets. As this is done, the plans elsewhere will benefit from the experience of the pioneer experiment in Chicago.⁹

Women's garment industry.—A decision of a board of referees in 1921 set up in the women's garment industry of Cleveland, Ohio, a plan by which each employer guaranteed to his employees, members of the International Ladies' Garment Workers' Union, 41 weeks' employment each year. Under the plan each employer, while making no actual cash payment to a fund, as in the men's clothing industry, gave a surety bond for an amount equal to $7\frac{1}{2}$ per cent of his direct labor pay roll. His workers who had more than 11 weeks of idleness during the year were entitled to benefits, from this amount, of two-thirds of the weekly minimum rate for all unemployment in excess of the 11 weeks. There was no provision for a continuing fund; any amount not required to be paid out in unemployment benefit could be retained by the employer.

⁹ Documentary history of the Amalgamated Clothing Workers of America, 1924-1926, p. 31.

This, it has been stated,¹⁰ was "the first experiment of its kind in America," and is regarded by the union itself as "the most direct attack" it has ever made upon the problem of unemployment.

Although some dissatisfaction developed with the working of the plan, even as early as in the fall of the year of its adoption, the plan has been continued in the succeeding agreements. The benefits have been reduced to 40 weeks' guaranteed employment and one-half the weekly wage.

On the whole the plan is stated to have worked out satisfactorily, and only a small percentage of the employers were required to make payments of out-of-work benefits. The union states that—

Our aim was not to punish the employer, but to give the workers enough work to enable them to maintain their families during the year. Indirectly our aim was to create more interest on the part of the employers in seeing to it that the workers are working—that they have employment. A guaranty of 40 weeks meant that the employers would possibly go out of their way to take orders which would keep the workers employed 40 weeks during the year, because they knew that, if not, they would be penalized to the extent of 50 per cent of the workers' wages for the period of deficiency.

Early in 1924 the International Ladies' Garment Workers' Union formulated demands for the New York City market which included a guaranty of a certain number of weeks' employment during the year and a joint unemployment insurance fund similar to the plan in the men's clothing industry in Chicago, but the employees were to contribute only 1 per cent of earnings and the employers 2 per cent of their pay roll. As no agreement could be reached with the employers, the whole set of demands was referred to a commission appointed by the Governor of New York. Its report recommended the adoption, among other things, of the unemployment insurance scheme, but restricted it to "manufacturers" only, so that jobbers were only indirectly included. Collection of contributions began on August 4, 1924.

Internal dissension had, however, developed between the "Lefts" and "Rights" within the union, which came to a climax in the summer of 1925, almost disrupting the union. The "Lefts" gained control of the joint board of the union, but, according to reports, neglected the fund which had taken so long to establish, and made little or no attempt to enforce the collection of premiums. A strike called in 1926 led to the further disorganization of the fund. By the time the "Rights" regained control of the organization the union had become so weakened that it was in no position to enforce the payment of contributions. An agreement was therefore reached with the employers early in April, 1927, providing for suspension of the fund. No further contributions will be paid into the fund until July, 1928.

Practically the same situation developed as regards the fund in the women's clothing industry in Chicago. Reports state that during the "Left" domination the contribution of the employers was cut from 1½ per cent of pay roll to three-fourths of 1 per cent, and the employees' contribution of three-fourths of 1 per cent was eliminated entirely. No great effort was made to enforce the collection of even the reduced contribution, and the condition of the

¹⁰Levine, Louis: *The Women's Garment Workers*. New York, B. W. Huebsch (Inc.), 1924, p. 372.

fund has been so weakened that in the Chicago market of this industry there is now "no such institution worth mentioning."

Fur industry.—The International Fur Workers' Union also succeeded in obtaining, for the New York market, an unemployment insurance plan as part of its agreement of 1924. Under it both employers and workers were to contribute $1\frac{1}{2}$ per cent of pay rolls and earnings, respectively. An expert was requested to work out a plan of operation which was to go into effect early in 1926. In the meantime factional trouble had broken out within the union, and for a time the "Lefts" were in control. During this time the agreement with the employers expired, and as no terms could be reached a strike was called which lasted from February to June, 1926. When an agreement was finally signed the unemployment insurance provisions had been eliminated. This, it is said, was in return for the concession of a basic 40-hour week. The new agreement contains a general provision to the effect that "in the event of an unemployment emergency arising in the industry, and the conference committee functioning under the collective agreement * * * evolves and devises a plan for the relief and mitigation of such unemployment, that plan shall be binding upon the parties to this agreement."

It was estimated, in the *Fur Worker* of November, 1927, that, assuming the average wage of a fur worker to be \$50 per week, the amount contributed to the fund (on the basis of 12,000 workers), would have been \$18,000 a week, or over \$1,000,000 altogether since the time of the settlement of the strike.

The new agreement runs until January, 1929. Whether the union will at that time be able to persuade the employers to grant this provision again remains to be seen. The loss of the scheme is particularly regretted because New York City is the principal fur market, and once the plan had been introduced there it would have been easier to obtain it in the other cities. The 1926 agreement in the Chicago fur industry had contained a clause stating that both parties were in favor of an unemployment insurance fund, and provided that within a year the conference committee should submit a detailed plan for the establishment of such a fund.

Cloth hat and cap industry.—An unemployment insurance plan was secured in St. Paul in October, 1923, by the cap branch of the Cloth Hat, Cap and Millinery Workers' International Union by a collective agreement with one firm; subsequently agreements were made with other firms of the city. A similar fund was established in the New York, Chicago, and Philadelphia markets in 1924; in Boston, Baltimore, and Scranton in February, 1925; and in Milwaukee in August, 1925.

Under the plan all of the cost is paid by the manufacturers in the cap industry with whom the headgear workers' union has contracts. Each employer pays over to the union each week 3 per cent of his pay roll for that week, to be used for the payment of unemployment benefits "and for no other purpose." The employer loses all title to the sums paid into the fund by him.

In most cases the benefits were paid at the rate of \$10 a week for men and \$7 a week for women for a period not to exceed seven weeks during the year and after a waiting period of two weeks.

The condition of the New York City fund after the first year of payment was so prosperous that the benefits were increased to \$13 and \$10, respectively; the wisdom of this increase was questioned, however, at the 1927 convention, where it was stated that although the increased benefits had been in effect only some eight months, the reserve was "already dwindling very fast." During the two years ending March 1, 1927, 3,900 members in the eight manufacturing centers received \$175,907 in benefits, and reserves in the fund at the end of the period amounted to \$142,721.

The last two conventions of the union have authorized the general executive board to formulate plans by which a national fund administered through the international union could be substituted for the present local plans. As a preliminary step the benefits and systems of the various local plans are to be equalized, and the next convention will then take up the question of a national fund.

Felt-hat industry.—A plan similar to that of the cap industry has been obtained by New York City locals Nos. 3 and 45 of the United Hatters of North America. In this plan also the employers pay the whole cost of the insurance, contributing 3 per cent of the pay roll. The fund is disbursed by a union committee of six members.

Benefits amount to \$10 per week, after a member has been idle for two weeks, but no member may draw more than six weeks' benefit in any one year.

The fund was started in 1925 but no payments were made until July 1, 1926. Local No. 3 has since that time paid in benefits \$15,980.

Wall-paper industry.—The national agreement of the United Wall Paper Crafts, which runs to July 15, 1929, provides for a guaranty of 50 weeks' employment per year for print cutters; there is the same guaranty for machine printers and color mixers, but in this case there is a proviso that 45 of these shall be at full pay and that half rates shall be paid for any idle time over 45 weeks and up to 50 weeks, but "the 5 weeks at half pay to be optional with the manufacturers."

Labor's Unemployment Conference

THE interest of organized labor in the problem of unemployment found expression in a conference on unemployment held in Philadelphia in July, 1927.¹¹ Taking the position that unemployment is not an "irremediable condition," representatives of some 150 trade-unions, as well as economists and statisticians, met to consider possible ways of lessening or eliminating it. While, as was pointed out, the conference did not solve the problem by any means, it made clear the opinion of those present that labor alone can not supply the remedy, which must come from "not only advance planning but also the cooperation of labor and management and the consumer in a common task."

One of the needs emphasized in the conference was that of statistics showing the extent of unemployment, and it was pointed out that trade-unions could assist materially in gathering such data. The American Federation of Labor, as a beginning in this line, has undertaken the collection of data showing the percentage of trade-unionists out of work in the various industrial centers.

¹¹ For a detailed account of this conference see *Labor Review*, November, 1927, pp. 122-125.

Unemployment in Europe

RECENT reports indicate that employment conditions in Europe as a whole were considerably better at the end of 1927 than they had been at the end of either 1925 or 1926. The principal exceptions are Italy and France. In Italy the number of unemployed has increased sharply during the past two years, and in France employment conditions in 1927, although better than in 1926, were worse than in 1925.

Information regarding unemployment conditions are published currently by 18 European countries, including all the larger countries except Russia, Yugoslavia, and Spain. The statistics themselves are of varying completeness. The most complete are for those countries having national unemployment insurance and for those where the trade-unions report the per cent of union members out of work. In no case, of course, do these figures represent the total number of persons without work, and thus the figures for one country can not be very well compared with those for another. But within the same country the statistics, when the methods of compilation remain substantially unaltered, do indicate with considerable accuracy whether conditions are getting better or worse.

The accompanying table gives, for each of the 18 countries referred to, the available data on unemployment for December, or the latest reported month, of the years 1925, 1926, and 1927.

UNEMPLOYMENT IN EUROPE TOWARD CLOSE OF 1925, 1926, AND 1927

Country and class of unemployed	Month ¹	1925	1926	1927
Austria (persons in receipt of benefit).....	December	207, 834	205, 350	² 181, 117
Belgium (members of unemployment insurance societies): ³				
Number.....	November	13, 513	8, 217	⁴ 8, 442
Per cent.....	do.	2.3	1.4	1.4
Czechoslovakia (persons in receipt of benefit):				
Number.....	October	(⁵)	35, 948	8, 677
Per cent.....	do.		3.1	0.8
Denmark (trade-unionists): ⁶				
Number.....	December	85, 944	88, 854	-----
Per cent.....	do.	31.7	32.2	30.5
Estonia (persons registered).....	November	4, 607	4, 157	4, 940
Finland (persons registered).....	do.	3, 604	2, 330	2, 449
France (persons in receipt of benefit).....	December	645	17, 178	⁷ 11, 267
Germany:				
Trade-unionists ⁸				
Number.....	November	394, 096	484, 978	⁹ 294, 413
Per cent.....	do.	10.7	14.2	7.4
Persons in receipt of benefit.....	December	¹⁰ 1, 498, 681	¹⁰ 1, 748, 597	² 830, 586
Hungary (trade-unionists).....	November	27, 488	18, 576	11, 063
Irish Free State (compulsorily insured persons):				
Number.....	do.	(¹¹)	26, 984	25, 586
Per cent.....	do.		11.0	11.6
Italy (persons registered as totally unemployed).....	do.	112, 059	148, 821	375, 734
Latvia (persons registered).....	do.	3, 672	5, 149	5, 033
Netherlands (members of unemployment insurance societies): ¹²				
Number.....	do.	26, 859	25, 396	29, 759
Per cent.....	do.	10.6	9.5	10.6
Norway:				
Trade-unionists ¹³				
Number.....	do.	7, 284	-----	-----
Per cent.....	do.	19.0	24.9	21.6
Persons registered.....	December	26, 276	30, 558	28, 532
Poland (persons registered).....	do.	311, 090	190, 140	160, 440
Sweden (trade-unionists):				
Number.....	November	27, 428	34, 200	-----
Per cent.....	do.	11.8	13.0	12.5
Switzerland (persons registered) ¹⁴	do.	15, 760	16, 366	12, 079
United Kingdom (persons compulsorily insured): ¹⁵				
Number.....	December	1, 243, 087	1, 431, 840	¹⁴ 1, 194, 305
Per cent.....	do.	10.4	11.9	9.8

¹ Usually close of month.² Dec. 15.³ Wholly unemployed.⁴ Dec. 3—last working-day of last week in November.⁵ Statistics presented in different way on this date.⁶ Includes only unions paying unemployment benefit.⁷ Dec. 17.⁸ Wholly unemployed in unions paying unemployment benefit.⁹ Including miners.¹⁰ Jan. 1.¹¹ Figures not given for November, 1925.¹² Calculated from weekly averages. Provisional figures.¹³ Includes short-time workers claiming benefit considered as unemployed on date in question.¹⁴ Dec. 19.

The outstanding features of the above table are the decreases in unemployment from 1925 to 1927 in Austria (13 per cent) and in Poland (48 per cent), and from 1926 to 1927 in Germany (about 53 per cent) and in France (35 per cent), and the very great increase in unemployment in Italy from 1925 to 1927 (235 per cent).

It is also interesting to note the very heavy proportion of trade-unionists unemployed in Norway and Denmark toward the close of each of the last three years. In Denmark, indeed, more than 30 per cent of the trade-unionists were reported out of work at each of these periods.

Public-Service Retirement System of Belgium—Supplementary Note

SINCE the publication of the article on the public-service retirement system in Belgium in the February, 1928, Labor Review, the Bureau of Labor Statistics, through the courtesy of the Department of State, has obtained additional information regarding the contributions and amounts paid under that system. The table below shows by years, from 1924 to 1927, the aggregate amount of pensions paid from the public treasury to civil employees; the amounts paid in pensions to widows and orphans of civil-service employees from the special autonomous funds formed by the employees' contributions; and the amount of contributions to these funds:

AMOUNTS PAID IN PENSIONS TO BELGIAN CIVIL SERVICE EMPLOYEES AND TO THEIR WIDOWS AND ORPHANS, AND CONTRIBUTIONS OF EMPLOYEES TO WIDOWS' AND ORPHANS' FUNDS, 1924 TO 1927

Year	Amounts paid in pensions to—		Employees' contributions to widows' and orphans' pension funds
	Civil service employees	Widows and orphans of civil service employees	
	<i>Francs</i>	<i>Francs</i>	<i>Francs</i>
1924.....	56,910,100	39,946,800	50,858,000
1925.....	68,598,400	51,914,550	59,844,700
1926.....	80,468,900	70,472,850	63,903,550
1927.....	122,127,900	97,313,475	87,234,700

INDUSTRIAL RELATIONS AND LABOR CONDITIONS

Decision of Interstate Commerce Commission on Contracts for Maintenance Work

A DECISION of the Interstate Commerce Commission which was handed down January 3, 1928, is of interest to labor. During the war, because of difficulties experienced in obtaining sufficient men for maintenance work, the Pittsburgh & Lake Erie Railroad Co. inaugurated the practice of entering into verbal contracts with contractors for recruiting and lodging laborers for work on the railroad right of way. This practice has been continued and extended to the present time.

The railroad company provided living and commissary quarters for the men, together with the necessary equipment—fuel, light, water, etc.; the necessary personnel for service and supervision in the camp; some 30 checkers to see to the accuracy of the contractor's record, etc.; besides paying the contractor an additional 10 per cent upon his total pay roll.

Besides the force recruited by the contractor the railroad has upon its own pay roll a regular force of maintenance-of-way men, but it was shown that since 1920 the proportion of the maintenance work done by this regular force has been steadily decreasing, the contractor's force being relied upon more and more, with a corresponding increase in amounts paid to the contractor. Although the hourly rates of wages paid by the contractor have in some cases been less than those paid by the carrier to its regular maintenance force, to this rate must be added the cost of all the items furnished by the railroad, as well as the additional 10 per cent of pay roll. Because of this, the hourly cost to the railroad for men furnished by the contractor is considerably above the nominal hourly rate. During the period from March 1, 1920, to June 30, 1925, the average cost to the railroad per hour for a man furnished by the contractor was 45.35 cents, while the rate paid to the regular force of the road was 42.76 cents; during the period \$6,083,068 was paid for contract labor, of which \$1,121,357 (23 per cent) represented the extra cost to the railroad above the regular railroad hourly wage rate. Thus 23 per cent was paid to the contractors in addition to what the men received for their labor.

In contending for a continuance of the practice the representative of the carrier cited as an advantage of the contracting system that contractors "could require their camp help to work unlimited hours without extra compensation, as contractors were not subject to the Labor Board." There were also "quite a number of things of that kind that the contractor who is not under governmental regulation can do that we can not do."

Although the carrier contended it could not compete with other roads without its labor cost exceeding that set by the Railroad Labor Board, the commission showed that it was already paying out to contractors 2.59 cents per hour more than the board's scale. During the whole period since 1920 this excess cost had amounted to \$611,268.

The commission found that the contracting system resulted "in substantially greater expenditures" than would have been necessary if all of the work had been done by the company and that the practice "can not be regarded as consistent with efficient and economical management."

An English Method of Payment for Increased Production

A RECENT book, "Cooperative Production: The Priestman-Atkinson System,"¹ sets forth the essentials of a plan of rewarding workers for increased production, which, although it has been in operation in England to some extent for the past 10 years, is new in this country. It is in brief a system of payment by results, but differs from other systems which have been tried.

The author briefly reviews these other systems of payment, including the straight time-work plan, and the straight piecework plan, the premium bonus system, profit sharing, copartnership, payment by sliding scale, etc., and shows why, in his opinion, none of these are entirely satisfactory.

The new plan of payment is called "cooperative production." This is somewhat misleading, since it is apt to be confused with cooperative workshops owned and operated by the workers themselves. It is used, however, for lack of a more suitable name. The author states that the plan is not "just a benevolent suggestion which may or may not prove to be feasible or satisfactory," but one which has been in practical use since 1917.

The basis of the plan is collective and its primary object is the increase of the plant's production. "Cooperative production," as the author uses it, is a system of paying straight wages and an additional bonus varying according to increased production over a determined standard. This relates the reward directly to the increased effort.

It may be introduced into any factory, whatever its organization or state of efficiency, since it takes into consideration only the existing state of affairs and provides a stimulus to greater production. The writer states that there is practically no cost to the operation of the scheme; there is no payment to the workers unless there is an increase in output. "The benefit to the employer is in the saving of overhead expenses, the increased profit due to increased output, the production of more work from the same amount of machinery, less supervision, the avoidance of strikes or other stoppages unless of a national character, the quick and satisfactory settlement of disputes or difficulties in the works, the certainty of giving deliveries, industrial peace and confidence in the factory."

¹ Atkinson, Henry: *Cooperative Production—The Priestman-Atkinson System*. London, Ernest Benn (Ltd.), 1927.

Under the scheme a standard period is taken and the production at the end of every four weeks is compared with this standard production. The output is reduced to points and the value of the output for the month must exceed this basis or standard number of points if the men are to receive extra payment. Payment for the additional output is made at a fixed rate determined upon in advance. The results in increased output are those of the combined effort of the whole force. Each man may do his best and by so doing benefits not only himself but all his fellow workers.

It is pointed out that though the bonus depends upon output, it is by no means what is usually meant by "payment by results." The bonus is paid to everyone in the factory. "As every person receives the same percentage on wages, it is to each person's interest not only to work to the best of his ability and capacity but to help others in every possible way. * * * It is quickly realized that smooth running means direct returns in bonus payment."

The most noticeable feature resulting from the system, in the author's opinion, is the good feeling created throughout the factory. "This is especially the case between the management and the workers as a whole." Jealousies between departments and between different classes of workers disappear because all are working for a common end.

Some of the other benefits claimed for the system are:

The men work at their optimum speed and find much satisfaction in always doing their best without the necessity for a watchful foreman constantly supervising them.

The slack worker generally improves, but if he is incorrigible he leaves.

Men prefer to be in a collective system. If they stand out they get no help and they can not earn the full reward of their effort even under piece rates because they do not get the necessary assistance.

The elimination of the slacker means a better tone in the factory and automatically increases output because a productive worker takes the place of an indifferent one.

The men appreciate the advantage of everyone having a good all-round bonus rather than a few workers receiving exceptionally high wages.

As the standards are fixed by the work previously done, the men can not possibly lose by the system, and the fairness of the basis encourages them to put their best into their work.

It is a great satisfaction to know that the bonus is not jeopardized even when the firm is losing financially.

The impossibility of cutting times or rates gives them a sense of satisfaction and security.

The men make suggestions and recommendations for improving the facilities and amenities of the factory.

The men take a greater interest in the management of the factory and appreciate manufacturing difficulties much more than before.

Detailed Basis of Scheme

AS ALREADY stated, the standard on which the whole scheme is based is the total output of the factory over a given normal period. This period should be as long a time as possible in order to insure its being representative; it should cover at least one year, but two years are better, though they need not be consecutive. The period should be one of normal production.

The period having been selected, a list is made of all commodities manufactured during that period. The product is then classified (according to the nature of the work) by weight or by size, etc.

These classes may again be subdivided as found desirable or necessary. This is done in order to enable the labor value of each class or subdivision to be determined. The time spent in the production of each article is reduced to a skilled man-hour basis. "Four man-hours" may mean the time of a skilled man for 4 hours, of two skilled men for 2 hours, or of one skilled man and one unskilled man for $2\frac{2}{3}$ hours (counting the time of the unskilled as one-half that of the skilled man). Each article is therefore given a "point value" corresponding to the man-hours spent upon it, and this, multiplied by the output of this article, will give the total point value of the article for the factory.

The ascertainment of correct labor values is very important, as inaccurate figures here will result either in a larger bonus than is earned, in too low a bonus, or even in a deficit, although the workers may be expending increasing energy and intelligence on their jobs. If a weight classification is being used the relative values may be obtained on a weight basis by noting the exact weight of each article and the time spent on it and ascertaining the hours per hundred-weight from these figures. The total weight of all articles in each class is divided by the total hours and the result shows the labor value per hundredweight for the class.

A nice point for determination is the relation of unskilled to skilled labor on the various jobs. This can be determined from the time sheets, from verbal information, or by estimates. In factories where work is of a mixed character this is a very important point, as it is evident that the real labor values of the different classes of work can easily be misrepresented if the proper incidence of labor has not been determined.

When all the figures are brought together, a rearrangement of classification may be necessary, as it may be found that some articles are of such special nature as to throw off the average for the weight group. Other bases than that of weight may be used in classifying the articles, but it should be kept in mind that the classification should be such that the workers can readily understand the values placed upon each class and how they are derived, and also that the classification should be in such form as will facilitate calculation, thereby enabling the system to be installed without entailing extra clerical help.

The longer the standard period, the more articles taken to form the basis, and the wider the classification, the more accurate will be the schedule of point values. When this schedule has been drawn up, the total production of the plant during the standard period, in terms of points, is then calculated by multiplying the number of articles or total weight (or whatever the classification being used) in each class by the point value of the class and adding the results.

The total number of skilled man-hours worked throughout the plant during the standard period is obtained from the time sheets. The total production, in points, divided by the total man-hours gives the standard points per man-hour. This, the author emphasizes, is the most important figure in connection with the system. This, however, will rarely prove to be a whole number. For purposes of easy calculation, therefore, the figure obtained is multiplied by a constant which will produce a whole number easy of use. Thus, if

10 is desired to be the number to use as the standard number of points per man-hour, the actual figure obtained as above must be multiplied by a figure (constant) which will produce 10. This means that in all calculations of the relative value of the different products, the actual figure obtained must be multiplied by this constant, in order to make the figures for all the products consistent. The following practical example is given:

Product	Actual output	Hours each	Total hours
Class A.....	150	10	1,500
Class B.....	300	5	1,500
Class C.....	450	2	900
Class D.....	600	1	600
Total hours on direct production.....			4,500

The total hours of all workers (both direct and indirect production) amount to, say, 5,850. The ratio between 4,500 and 5,850 is 0.77. But if 10 is to be taken as the arbitrary standard number of points per man-hour, then the constant 13 must be used as the multiplier, for $\frac{10}{0.77}$ is 13. The hours spent on each class of article are therefore multiplied by 13, giving the final standard point values for the factory as follows:

Product	Standard output	Point value	Total points
Class A.....	150	$10 \times 13 = 130$	19,500
Class B.....	300	$5 \times 13 = 65$	19,500
Class C.....	450	$2 \times 13 = 26$	11,700
Class D.....	600	$1 \times 13 = 13$	7,800
Total points produced.....			58,500

Any new jobs undertaken may be given a point value by estimating the amount of labor necessary, subject to later check.

The author is of the opinion that the staff (including foremen) should not be included with the workers in calculating output, but should be kept separate. The staff bonus will depend on the proportion of staff hours to work hours.

The schedule can be modified as made necessary, whether by the introduction of new methods, new machinery, etc.

Conditions of Operation

CERTAIN conditions are pointed out which must be observed if the plan is to be successful:

1. All questions arising out of the working of the plan must be dealt with by the management and the workers' committee together. If no committee exists, one should be formed. The committee will examine the basis of the system, check the calculation of the bonus, discuss any suggested changes in point values, etc.

2. Each worker must have the right of personal appeal to the management.

3. The methods used in deriving the standards on which the bonus is based must be explained and opportunity given to examine the figures for each production period.

4. The period of payment should be settled before the plan is put into operation. Usually the period is four weeks, the bonus being paid at the end of that time. It is the author's opinion that this is preferable to weekly payments because the sum is larger and "brings the benefit more clearly to the men."

5. The management must have the right to reject any work not up to standard quality.

6. A deficit incurred in any period should be deducted from any subsequent surplus before the balance of points is credited for bonus. It makes the men maintain their efforts "even during a bad period, because the more they relax their energies the greater the deficits to be subsequently wiped out."

7. Standards should not be changed unless new machines or methods are introduced with the object of increasing production, and such changes should be announced before being put into operation.

Industrial Cooperation in England ¹

THE Labor Review for December, 1927 contained (p. 57) an account of a proposition made by the trade-union leaders that responsible representatives of the organized employers and organized workers should get together to discuss the problems of industry as a whole with a view to seeking a general improvement of the situation. There was no immediate result, as the federated employers felt that such discussions should be carried on in the individual industries and establishments instead of on the national scale suggested.

The idea, however, seemed good to some of the large employers, and toward the end of November a group of industrialists, headed by Sir Alfred Mond, wrote to the general council of the Trade Union Congress, proposing a joint conference with a view to discussing the possibilities of such cooperative efforts. The signers felt that there was need of discussions covering the field of industrial reorganization and industrial relations as a whole, which should not take the place of similar conferences within the separate industries but should rather serve as an introduction to them. The difficulties of the present situation, they felt, could be overcome only by the whole-hearted cooperation of both sides, and this could best be fostered by a frank interchange of views.

We realize that industrial reconstruction can be undertaken only in conjunction with, and with the cooperation of, those entitled and empowered to speak for organized labor. * * * We believe that the common interests which bind us are more powerful than the apparently divergent interests which seem to separate.

The prosperity of industry can, in our view, be fully attained only by full and frank recognition of facts as they exist and an equally full and frank determination to increase the competitive power of British industries in the world's markets, coupled with a free discussion of the essentials upon which that can

¹ The data, on which this article is based are from *Industrial and Labor Information*, Geneva, Jan. 2, 1928 (p. 9); and Manchester [England] *Guardian*, issues of Jan. 13, 1928 (pp. 10, 11), and Jan. 25, 1928 (p. 5).

be based. That can be achieved most usefully by direct negotiation with the twin objects of the restoration of industrial prosperity and the corresponding improvement in the standard of living of the population.

After much discussion the general council accepted the invitation and a formal conference between representatives of the two sides was held on January 12, 1928. At this meeting little was done beyond discussing the desirability of establishing a continuing body and considering some of the matters with which it might deal. Sir Alfred Mond, in explaining his views of what might be accomplished, impressed the workers' representatives by his appreciation of their standpoint.

He realized that the industrial peace at which he aims can only come about under a "rationalized" industrial system, and that the worker can not be expected to acquiesce in a situation in which he has no security of status or employment, no pension rights nor recognized channels for discussing his own difficulties or those of the industry in which he works. If there is to be industrial peace, Sir Alfred suggests, each of these demands must be fully examined and a method discovered by which all industrial problems may be continuously discussed as they arise.

On January 24 the general council decided by a large majority to continue the discussions with the employers' body, undertaking to prepare reports to the unions as to the progress of the discussions. Each body has appointed a committee to discuss the questions at issue and future arrangements.

The two committees will now settle down to framing a practical program of investigation. Another full conference is not likely for some time, and then, probably, only after a good deal of preliminary work has been done and an agreed synopsis of the kind of work on which joint conclusions can most usefully be attempted has been drawn up.

Working Conditions in Swedish Agriculture in 1926¹

A STUDY of working conditions in agricultural undertakings in Sweden for the year 1926 shows employment conditions in each rural commune, hours of labor, and the wages of the lower-paid workers.

The supply of agricultural labor in Sweden before the outbreak of the World War was reported to be insufficient in about one-third of the communes, but the paralyzing effect of the war on industry resulted in driving a large number of workers back to the farms. The renewed industrial activity in 1916 and 1917, however, again attracted these workers to industrial employment so that there was a shortage of agricultural workers until the unemployment crisis of 1921. Since that time the condition of the agricultural labor market has been satisfactory and at the close of December, 1926, only 2.2 per cent of the 2,093 rural communes reporting stated that the supply of labor was insufficient.

As a result of the fluctuations in the labor market there have been very decided changes in the wages paid. From 1913 to 1920, owing to the relatively small supply of labor and the favorable conditions for the production of food, wages were maintained at a relatively

¹ Sweden. [Social Departementet.] Socialstyrelsen. Arbetartillgång, Arbetstid och arbetslön inom Sveriges jordbruk år 1926. Stockholm, 1927.

high point while during the years following 1920, although industrial workers have been able to maintain their wages at a comparatively high level, the wages of agricultural workers have been considerably reduced.

Unemployment among workers seeking year-round employment was reported by 122, or 6.2 per cent of the communes, while 7 per cent reported unemployment among summer workers and 21.2 per cent among agricultural or forestry workers seeking winter employment. There was comparatively little unemployment among women.

Information as to unemployment among their members was secured from the agricultural unions in certain districts. These reports showed a greater amount of unemployment than was reported by the presidents of the communes but this was accounted for by the fact that the union reports covered many individuals who were either very young or very old or semiinvalids, while the communal reports covered in the main only able-bodied workers.

The length of the average workday has changed very little since 1920, although between the years 1911 and 1920 there was a very considerable reduction in the hours of work. During the summer there is very little difference in the length of the workday in the principal agricultural districts but there is considerable variation in the length of the rest period, so that the total time on duty varies considerably. The average workday for all the communes in 1926 was 9.8 hours with a noon rest of 2.1 hours in summer, and 7.8 hours and a rest period of 1.3 hours in winter. The hours of carters who have to groom the horses before starting to work are from one-half to one hour longer. Workers in charge of the livestock have to work about the same length of time the year round, the average being 10.4 hours in summer and 10.2 hours in winter, but they have considerable idle time during the day. On a number of farms the hours of work of ordinary laborers and of carters are from half an hour to three hours shorter on Saturday than on the other five days of the week.

In the present inquiry the wages paid for ordinary farm labor only were secured, these workers being the least skilled and the lowest paid. On small farms, wages of unmarried workers include board and lodging. There was great variation in the wages paid on these farms in the different regions but for the whole country the money wages of these workers averaged 560 kronor² per year and board and lodging were valued at 566 kronor. For a maid servant the corresponding averages were 422 kronor and 476 kronor. In addition, in one Province clothing and other articles form part of the payment. For married workers employed on the large estates the average annual money wages amount to 626 kronor and there is payment in kind, called "stat," consisting of milk, wheat, potatoes, etc., and lodging. The average annual value of the total wages is estimated to be 1,328 kronor. In the southern part of Sweden the lodging provided consists of two rooms and a kitchen, while in other parts of the country lodging of one room and kitchen is furnished. The average value of the lodging furnished is 131 kronor and of fuel 100 kronor. Ploughmen who also care for their horses receive higher cash wages and also the payment in kind is more important, so that the total

² Krona at par = 26.8 cents; exchange rate for 1926 was about par.

value averages 1,424 kronor. Workers engaged by the year but paid by the day rarely receive payment in kind but their average daily wages in summer are 4.25 kronor and in winter 3.33 kronor, less 1.30 kronor and 1.15 kronor, respectively, if they receive board. The average daily wages of workers hired by the day are 4.72 kronor in summer, and 3.68 kronor in winter. Among the day laborers are a great number of women who are employed in the beet fields and potato fields, in harvesting and other seasonal operations. They receive on an average 2.96 kronor without board or 2.07 kronor with board if they are considered as part of the farm personnel, and slightly higher rates if they are employed only occasionally. During the winter wages are much lower for both men and women employed by the day.

The wages of Swedish agricultural workers, which had increased greatly during the war and immediately afterwards, were reduced from 40 to 50 per cent during the years 1921 to 1923. In 1926 the wages of men were approximately 70 per cent higher and of women 90 per cent higher than in 1913.

PRODUCTIVITY OF LABOR

Productivity of Coal-Mine Labor in the United States, 1926

THE accompanying table shows, among other significant facts regarding coal production, the average output per man per day in each of the coal-producing States in the year 1926. The table is compiled from a report of the United States Bureau of Mines, issued in mimeographed form and entitled "Bituminous coal tables, 1926."

The distribution of the 573,366,985 net tons of bituminous coal mined, by method of mining, is reported to have been as follows: Tonnage undercut by hand, 90,772,894; shot off the solid, 52,439,914; cut by machine, 410,912,680; stripping, 16,922,695; not specified, 2,318,802.

PRODUCTION AND VALUE PER TON, MEN EMPLOYED, DAYS WORKED, AND OUTPUT PER MAN PER DAY AT COAL MINES IN THE UNITED STATES IN 1926

[Exclusive of product of wagon mines producing less than 1,000 tons]

State	Total production (net tons)	Average value per ton	Number of employees			Average number of days worked	Average tons produced per man per day
			Under-ground	Surface	Total		
Alabama	21,000,962	\$2.29	23,024	4,321	27,345	266	2.89
Alaska	87,300	5.26	79	52	131	221	3.02
Arizona	624	1.60	1	1	1	90	6.93
Arkansas	1,459,017	3.77	2,856	733	3,589	135	3.00
California, Idaho, and Oregon	18,708	3.74	71	20	91	103	1.99
Colorado	10,637,225	2.78	10,854	1,961	12,815	202	14.11
Georgia	59,869	2.89	127	127	253	253	1.86
Illinois	69,366,923	2.14	68,288	7,582	75,870	172	5.31
Indiana	23,186,006	1.98	20,041	3,363	23,404	173	5.72
Iowa	4,625,487	3.07	8,192	677	8,869	183	2.85
Kansas	4,416,480	2.84	6,831	1,341	8,172	158	3.43
Kentucky	62,924,462	1.74	51,664	8,914	60,578	230	4.52
Maryland	3,078,353	2.21	3,207	474	3,681	235	3.56
Michigan	686,707	4.12	1,444	129	1,573	171	2.55
Missouri	3,008,495	2.98	4,102	1,168	5,270	174	3.27
Montana	2,797,760	2.46	2,002	417	2,419	162	7.14
New Mexico	2,817,923	3.16	2,660	507	3,167	251	3.54
North Carolina	57,939	4.19	130	25	155	292	1.28
North Dakota	1,370,244	1.74	858	430	1,288	162	6.56
Ohio	27,872,488	1.96	33,852	4,695	38,547	159	4.56
Oklahoma	2,842,673	3.18	4,268	1,132	5,400	183	2.88
Pennsylvania, bituminous	153,041,638	2.13	135,959	20,040	155,999	224	4.37
South Dakota	14,428	2.91	52	52	104	127	2.19
Tennessee	5,788,741	1.90	6,750	1,198	7,948	234	3.11
Texas	1,091,158	1.60	1,414	236	1,650	195	3.39
Utah	4,373,793	2.37	2,943	602	3,545	186	16.65
Virginia	14,133,386	1.92	11,567	2,197	13,764	263	3.91
Washington	2,586,568	3.61	2,860	749	3,609	198	3.62
West Virginia	143,509,340	1.84	99,952	18,774	118,726	247	4.90
Wyoming	6,512,288	2.74	4,903	959	5,862	181	6.15
Total bituminous	573,366,985	2.06	510,824	82,823	593,647	215	4.50
Pennsylvania anthracite	84,437,452	5.62	126,231	39,155	165,386	244	2.09
Grand total	657,804,437	2.52	637,055	121,978	759,033	221	3.92

¹ Probably too high because of practice common in some districts of men going into mines to shoot coal and load mine cars on days when tipplies or mines as a whole are not in operation.

² Figures relate only to active mines of commercial size that produced bituminous coal in 1926. The number of such mines in the United States was 7,177 in 1926, 7,144 in 1925, and 7,586 in 1924.

Progress in Agricultural Engineering

AN ARTICLE by Raymond Olney, Secretary of the American Society of Agricultural Engineers, in the January 12, 1928, issue of the Engineering News Record (pp. 58-62), shows the significant relationship between agriculture and engineering and the labor saving effected and to be effected by the development of such relationship.

As Mr. Olney points out, engineering has already had a marked influence on agricultural development and in the future it is bound to be extensively applied in agriculture as it has been in other industries and the effects will be equally far reaching. It is only within the past 20 years, however, that the definite relationship between agriculture and engineering has been recognized. Up to a decade and a half ago, the application of mechanical power to farming was practically confined to the steam traction engine in threshing and for the operation of other heavy belt-driven machinery, and in large plowing equipments particularly in the Northwestern prairie regions. The introduction of the internal combustion engine tractor gave an immense impetus to the use of mechanical power in agriculture, especially after the World War. This power has been made applicable to many different agricultural jobs and at present there are a number of farms—even with diversified undertakings—on which there is no animal power used.

Utilization of Mechanical Power

ACCORDING to studies made by the United States Department of Agriculture, the farms in this country use approximately 16,000,000,000 horsepower hours per annum, the average power per agricultural worker per annum being about 1,500 horse-power hours.

The following excerpt from Mr. Olney's article indicates the possibilities of enormous saving in agricultural production costs through mechanical power and labor-saving machinery:

Power and labor constitute from 40 to 85 per cent of farm production costs. In manufacturing, power and labor costs have been reduced by mechanical power and labor-saving machinery. The same result is being obtained in agriculture. For example, G. W. McCuen at Ohio State University has demonstrated that complete motorization of the corn crop is practical and economical. In experiments extending over a period of four years he has reduced the time necessary to grow and harvest an acre of corn from 26 to 5.77 man-hours. A man with a tractor and three-bottom plow can plow 8 to 12 acres a day, but with horses and a walking plow 2 acres would be a big day's work.

Frank I. Mann, one of America's foremost farmers, once said: "Timeliness is the essence of good farming." By means of mechanical power the farmer is enabled to take advantage of this factor of timeliness. As a general thing, farmers can not afford to keep enough horses to supply the peak load of power needed in rush seasons. It is highly important that favorable soil and weather conditions for putting in or taking off a crop be taken advantage of. The period of ideal conditions usually is of short duration. With a tractor and a double shift of operators the farmer is enabled to carry on certain operations 24 hours a day.

Changes in Farm Machinery

WHILE mechanical power, particularly the tractor, has played an important part in extending the use in recent years of field and belt driven machinery, it has also brought about great changes in

agricultural machinery. For instance, the combined grain harvester-thresher, usually called the "combine" has done service for many years in the Pacific Northwest. Within the last few years it has been used east of the Rockies, in the wheat-producing districts of the Great Plains, and at present is coming rapidly into favor east of the Mississippi River. It is reported that the machine reduces the cost of wheat production 20 cents per bushel.

The tractor has made it possible to combine the use of such implements as the gang plow, disk harrow, smoothing harrow, soil packer and grain drill, which is a decided advantage in putting in a crop under favorable soil conditions.

The combine idea as applied to grain harvesting and threshing is of such tremendous importance from the standpoint of reducing production costs that engineers directly concerned with the problems of agricultural production are studying intensely the application of this idea to other crops. A combine adapted to corn harvesting is now in process of development. Combining the operations of digging, elevating, sacking, and even loading potatoes has been made practical.

The writer believes that the cutting and curing of alfalfa and other hay crops will be completely mechanized and that the mechanization of the harvesting of the cotton crop is not far off.

In addition to its field and tractive functions the farm tractor is widely used as a stationary power for driving ensilage cutters, feed grinders, corn husker-shredders, hay balers, buzz saws, portable saw-mills, rock crushers, grain threshers, and other appliances.

Automotive Transportation

"**M**OTORIZED transportation" has reduced the farmer's marketing costs and also his expenses for equipment and supplies. Motor vehicles have been of "outstanding importance in raising the standard of living of farm people."

Electrification

THE application of electricity to the farm is, he thinks, "the most significant and far-reaching development of engineering in agriculture during the past few years." Great numbers of farmers have purchased individual gas-engine driven electric plants chiefly to furnish electricity for lighting and other purposes where a strong current is not needed. There has also been an insistent and increasing demand among farmers for current from central power stations. In 1926 there were 100,000 miles of distribution lines which had been built into rural districts by the electric power companies. While the principal service is for lighting farm homes and other buildings, the current is also used to a great extent for numerous household appliances and also for the running of small motors. Up to the present, however, the gas tractor is reported as "the most economical form of power for the heavy belt work." The application of electricity to agricultural work, it is pointed out, will without doubt result in the adaptation of farm machines for the use of such power.

Many of the present traditional agricultural methods interfere seriously with the progress of agriculture along engineering lines and engineers are endeavoring to solve such problems as the elimination of frequent cultivations and the standardizing of widths of rows in crop production.

Land Reclamation

RECLAMATION engineering includes drainage, irrigation, terracing, reforestation, clearing and the development of reclaimed tracts for agricultural purposes.

Irrigation, which was once largely restricted to arid western land, is now being resorted to in semiarid sections east of the Rockies and much spray irrigation, especially in growing vegetables and small fruits, is being done in the East. Many engineers hold that supplementary irrigation in the humid sections of the United States has enormous possibilities.

The control of soil erosion calls imperatively for the skill of the agricultural engineer, investigations indicating "that 20 average crops do not draw as much fertility from the soils of this country as is lost in one year of erosion." Very considerable progress has already been made by engineers to remedy such erosion.

One of the difficult engineering problems in certain parts of the country has been the application of explosives and the development of special machinery for the clearing away of stumps and the removal of large stones.

The industrialization of agriculture has stressed the need for "drastic changes in the design and construction of farm buildings."

Mr. Olney holds that in the layout and arrangement of such buildings there are enormous possibilities for saving labor.

Farm Homes

ONE of the best agricultural engineering services has been the raising of the standard of living of the farmer and his family, to whom practically all city conveniences are now available. "The housewife is using electricity extensively for electric irons, vacuum sweepers, fireless cookers, sewing machines, washing machines, cream separators, cooking, and refrigeration."

Agricultural Engineering—A New Science

ALTHOUGH agriculture is one of the most ancient industries, agricultural engineering, as indicated above, is a comparatively new and rapidly advancing science. There are at present 40 State universities and colleges in the United States giving courses in this subject.

Agricultural engineers have shown that the corn-borer pest can be effectively combatted by mechanical means. The war against other pests and weeds is declared to be an engineering problem.

A demand is being created for various new and improved machines: Soil tillers, grain-drying equipment, hay driers, corn harvesters, cotton harvesters, and soy-bean harvesters. This is a challenge to the agricultural engineers, as is also the problem of finding new uses for agricultural by-products. A recent achievement along this line is the manufacture of paper pulp and wall board from corn stalks.

Mr. Olney concludes that no other field affords larger opportunities for the engineer than agriculture, the greatest basic industry.

WOMAN AND CHILD LABOR

State Laws Concerning Working Women ¹

A STUDY of State laws concerning working women, which has recently been issued by the Women's Bureau of the United States, brings out conspicuously the diversity of standards among the States which have undertaken to regulate conditions of women's industrial employment. In the matter of hours, for instance, 43 States have laws limiting the number of hours during which a woman may be employed, but there is little uniformity in this regulation. Ten States provide for an eight-hour day, and from this the permitted period runs up to 11 and even, in one case, to 12 hours per day. The laws differ widely from State to State as to the number and kind of industries or occupations to which they apply, their restrictions upon the length of the working week, provisions as to overtime, whether or not the specified hours may be worked at night, and so on. In many States so few occupations or industries come under the law that only a small proportion of the woman workers are affected.

No State has regulated each industry or occupation by the passage of all types of hour legislation. * * * States that regulate daily hours often fail to limit the number of weekly hours, or to provide for one day of rest in seven, lunch periods or rest periods, or to prohibit night work. A few States have all types of laws for their industries which employ the greatest numbers of women, notably Massachusetts, New York, and Pennsylvania, where there are laws of these various kinds covering manufacturing establishments. The States that have industrial commissions seem to be establishing regulations that cover all these points more rapidly than are the ones that depend on separate acts of their legislatures for each step.

One interesting fact brought out by the study is that in spite of the declaration of the Supreme Court that certain minimum wage laws were unconstitutional, nine of the States have established laws which have not been successfully questioned. Two of these—South Dakota and Utah—have set a minimum wage by law in specified industries or occupations.

The remaining States—California, Colorado, Massachusetts, North Dakota, Oregon, Washington, and Wisconsin—have created boards or commissions with power to study the various occupations or industries and establish minimum-wage rates for each or all of them. This has been done for one or more groups of workers in all the States except Colorado, where through lack of a sufficient appropriation the commission has never functioned. The awards of the boards or commissions are mandatory in all the States except Massachusetts, where they can be enforced only through the strong support of public opinion. The highest wages set in any of these awards are \$16 per week for all industries in the State of California. Where the rates are set by law they have not responded to the great rise in the cost of living since 1914. The rate set by act of the legislature in Utah is \$7.50 per week for experienced women.

¹ United States. Department of Labor. Women's Bureau. Bul. No. 63: State laws affecting working women. Washington, 1927.

Prohibited Employments for Women and Children in Argentina¹

THE Argentine law (No. 11317), passed on September 30, 1924,² regulating the employment of women and children, prohibits them from working in dangerous or unhealthful industries or occupations. A decree of June 9, 1925, elaborates on this provision and contains a detailed list of the employments in which women and young persons under 18 years of age shall not be engaged in the Federal capital and the National Territories. These include the refining and distilling of petroleum or other hydrocarbons used for lighting and heating; the manufacture of oil varnishes, carbon bisulphide, sulphuric and acetic ether, as well as the manufacture of collodion and its derivatives, waterproof cloth, sulphuric acid, and the refining of precious metals. Other prohibited employments are the following: The manufacture of aniline dyes, picric acid, oxalic acid, salicylic acid, murexide or purpurate of ammonium, chlorine, chloride of lime or hypochloride of lime, chromates, nitric or azotic acid. They may not be employed in the manufacture, smelting, or rolling of lead nor in the manufacture of litharge, red lead, massicot, white lead, oxide of lead, or zinc white. The manufacture of copper and pulverization of copper ore and the treatment thereof with acids as well as gilding and silver plating are prohibited, as is also work connected with the manufacture of arsenic compounds, sodium salts, potassium cyanide and its salts, and celluloid. Women and young persons under 18 years may not be engaged in carding processes in textile factories, in collecting rags and bones, nor in the manufacture of fireworks or explosives, nor in the distilling of tar products such as paraffin, creosote, benzene, and similar products. Additions may be made to the above schedule at the request of the administrative authorities if new industrial processes are introduced which must be classified as unhealthful.

Total or partial exemption from the above prohibitions may be granted on the application of the manufacturers subject to the approval of the National Department of Public Health, in cases where it is shown that the introduction of new manufacturing processes or the adoption of preventive measures has caused the industry to cease to be dangerous or unhealthful.

The law specifies that in establishments employing not less than 50 women a suitable nursery shall be provided for children under the age of 2 years, where they may be cared for while their mothers are at work.

¹ Argentina. *Cronica Mensual del Departamento Nacional del Trabajo*. January, 1926, pp. 1707-1709.

² For a summary of this law see the June, 1925, issue of the *Labor Review*, pp. 138, 139.

INDUSTRIAL ACCIDENTS

Decrease in Amputations in Industrial Accidents in New York State

MACHINERY is the chief cause of loss of members by amputation. Injuries of this sort have always been a source of concern to industry, not only from the standpoint of lowered efficiency but from that of compensation costs. It is therefore encouraging to note in a recent report of the industrial commissioner of New York State, published in the Industrial Bulletin for January, 1928, that in the last few years there has been a steady decrease in the severity of industrial accidents, which is most strikingly illustrated in a reduction from former years in the number of amputations for which awards were made in the year ending June 30, 1927. It appears that in the year 1923-24 compensation was awarded to 1,942 workers who lost arms, hands, fingers, legs, or feet in industrial accidents, while in the year 1926-27 the workers who received such awards numbered 1,693, a reduction of 12.8 per cent in the three-year period. There were 249 fewer injuries of this character although the total number of permanent injuries increased nearly 3,000. Amputations as a result of infections or other complications occurring some time subsequent to the injury are not included in these figures.

It is pointed out that although machine accidents are increasing somewhat, the increase is proportionately less than from other causes. While 145 more workers were permanently injured by machinery in 1927, the number of amputations of fingers, hands, or arms was 234 less. Punch presses caused 320 amputations, the compensation cost to industry being about \$1,000 each.

Accidents in Pennsylvania Industries in 1927

A PRELIMINARY report of accidents in Pennsylvania industries during the year 1927 and for the total period of 12 years during which the compensation act has been in force, has just been received by this bureau, and the following tables present a summary of this report:

ACCIDENTS IN PENNSYLVANIA INDUSTRIES DURING 1927 AND FOR THE 12-YEAR PERIOD JANUARY 1, 1916, TO DECEMBER 31, 1927

Item	Fatal	Permanent disability	Temporary disability	Total
Reports received:				
1927.....	2,064	1,665	157,025	160,754
12 years.....	28,866	11,264	2,137,692	2,177,822
Agreement approved:				
1927.....	2,001	3,479	69,406	74,886
12 years.....	23,756	23,903	795,363	843,062
Compensation awarded:				
1927.....	\$5,772,808	\$3,226,464	\$4,344,157	\$13,343,429
12 years.....	\$65,426,650	\$27,881,333	\$41,690,961	\$134,998,944
Compensation paid:				
1927.....	\$3,492,763	\$3,860,909	\$4,344,157	\$11,697,829
12 years.....	\$28,712,281	\$23,148,194	\$41,690,961	\$93,551,436

PERMANENT INJURIES REPORTED BY PENNSYLVANIA INDUSTRIES DURING 1927
AND FOR THE 12-YEAR PERIOD FROM JANUARY 1, 1916, TO DECEMBER 31, 1927, BY
NATURE OF INJURY

Nature of injury	1927		12-year period	
	Number	Compensation awarded	Number	Compensation awarded
Loss of legs.....	128	\$319, 780	1, 249	\$2, 745, 577
Loss of arms.....	63	153, 843	894	1, 978, 926
Loss of hands.....	214	431, 661	2, 847	5, 165, 199
Loss of feet.....	159	282, 506	1, 717	2, 827, 547
Loss of eyes.....	588	882, 420	7, 048	9, 764, 411
Loss of fingers.....	1, 502	500, 006	6, 763	2, 309, 035
Loss of phalanges.....	1, 202	226, 122	5, 666	1, 060, 442
Miscellaneous.....	209	421, 126	801	2, 030, 196
Total.....		3, 226, 464		27, 881, 333

HEALTH AND INDUSTRIAL HYGIENE

A Historical Retrospect on Expectation of Life ¹

THE statistical bureau [of the Metropolitan Life Insurance Co.] has received so many inquiries regarding the trend of the expectation of life (mean length of life) in both the recent and more remote past that we may infer this to be a subject of considerable public interest. We have, therefore, decided to publish herein a synopsis of some of the principal data available on this subject.

Many of the inquiries call for information regarding the increase in the length of life in the last fifty or a hundred years. Now, the extreme span of life has probably changed very little in historical times. There have always been some men who lived to a great age—80 years, 90 years, and an occasional century. What has changed very materially is the proportion of all the persons born who attain higher ages, and, contrariwise, the proportion that die in adolescence and infancy. The customary measure of the longevity characteristic of different times and places is the average length of life, as computed for a group or cohort of 100,000 persons who start out upon life together and are diminished in numbers gradually by deaths, in accordance with the observed rates of mortality. Instead of considering a cohort of 100,000 persons starting out on life together, it is often convenient to fix our attention upon 100,000 persons of a given age, as, for example, age 40, and to compute their average after-life time. According to the 1920 United States Life Table, for example, this comes out as 29.6 years for white males 40 years old, meaning that, on an average, white men 40 years of age will live 29.6 years longer, or reach age 69.6, according to mortality conditions of 1920. Or, in other words, a man 40 years of age may reasonably expect to live 29.6 years more. This is commonly expressed by saying that his expectation of life at age 40 is 29.6 years. The expectation of life at a given age is the same thing as the mean after-life time or the average number of years lived after attaining that age; and the expectation of life at birth is evidently the same thing as the mean or average length of life. If the words "expectation of life" are used without specifying any particular age, it is commonly understood that the expectation of life at birth is meant—that is, the average total length of life.

But to return to our main topic, namely, the increase in the length of life in past decades. It should be remarked, first of all, that the preparation of official life tables relating to any large section of the United States is a comparatively recent institution; the first life table of this kind, based on the mortality figures for the 10 States which first practiced regular official registration of deaths (the so-called "original registration States") relates to the first year of the present century, 1901. Similar life tables have been issued by the Census Bureau relating to the years 1910 and 1919-20. This last

¹ Reprinted from the Statistical Bulletin, November, 1927, published by the Metropolitan Life Insurance Co., New York.

table shows an expectation of life at birth of 55.33 years for white males and 57.52 years for white females.

The State of Massachusetts has been particularly progressive in matters of vital statistics. The regular series of life tables for this State dates back 10 years earlier than the first table of the Federal series, i. e., it represents the mortality of 1890. But there are some isolated life tables reaching farther back than this and here again Massachusetts is in the lead, with the Wigglesworth Life Table published in 1789, on the basis of mortality statistics gathered in certain parishes of the States of Massachusetts and New Hampshire. This table showed an expectation of life at birth of 28.1 years. But the method by which it was constructed is faulty and gives too low a figure. Wigglesworth, himself, was aware of this and suggested a correction by which the expectation of life at birth would be raised from 28.1 to 35.5 years.

The earliest of all life tables (except one or two very primitive efforts in the third century) is one for the city of Breslau, Germany, prepared by Halley and relating to the year 1693. This gives the expectation of life at birth as 33.5 years. A number of other early life tables of historical interest will be found listed in the accompanying table, which shows the corresponding expectation of life at birth. The table also presents modern American and English data.

Quite naturally, in such a historical review as has been presented of the principal American and English figures for the expectation of life, the question arises: What have been the gains achieved in past years? An exact answer, applying to the entire period of the records, can not be given, partly because of the uncertainty of the data, but more particularly because the areas to which they apply differ from case to case. For this reason only a roughly approximate statement can be made, especially where the earlier figures are involved. Making due allowance for this we may say, in round numbers, that in the 120 years from 1800 to 1920 there has been, in the United States, a gain of some 25 years in the expectation of life. It is pleasing to observe that the last two decades for which we have official data—namely, from 1900 to 1920—show relatively greater gains than the earlier periods. From 1900 to 1920 the original registration States show a gain of more than five years for white persons—that is, a rate of gain of over two and one-half years per decade. In contrast with this, if we adopt the figure of about 40 years as about representative of the expectation of life in 1850 (being guided in this by the data shown for Massachusetts and Maryland), we see that for the half century from 1850 to 1900 there was a gain of only about eight years—that is, a gain at a rate of only about one and a half years per decade. Moreover, judging by the figures for Massachusetts, 1878–1882, it is seen that most of the gain between 1850 and 1900 took place during the last two decades of the century. While this contrast in favor of the most recent years is very gratifying, it may be well to remind our readers of a point to which we drew attention recently—namely, that it will no doubt become increasingly difficult to add further to the expectation of life as we approach the limits of what can reasonably be expected with human possibilities. Perhaps we are beginning to feel now the operation of the law of diminishing returns, for the last year or two have not shown material gains in

expectation of life. It is not necessary here to rehearse once more our remarks regarding this point. Only this should be added, to prevent misunderstanding, that a slight setback in any one particular year is in itself of no great significance, since fluctuations up and down must necessarily be expected. Furthermore, all indications are that the present year will be a record health year and accordingly show a high figure for the expectation of life.

So far we have reviewed only expectation of life at birth, or mean length of life. A complete historical discussion of the expectation of life at all ages would lead us beyond the scope of an article adapted for these pages. But to one question, which is often asked, it is appropriate to give attention here—namely, as to the ages of life at which the gains have mainly taken place. It is a matter of common knowledge that the chief gain has taken place through the saving of infant and child lives. It is sometimes stated that there has been no gain in adult life, or even that there has been a loss. This however, overstates the case. In the decade 1910-1920 the only part of life at which the life tables show a decrease in expectation of life, for the original registration States, is age 83 and over for males, and age 92 and over for females. Only for the previous decade, 1900-1910, do the figures show slight decreases in the expectation of life over an extended age period, from age 32 to the end of life for males, and from age 47 to the end of life for females. Whatever occasion there may have been at that time for solicitude seems to be eliminated in the present state of affairs.

EXTRACTS FROM SOME HISTORICAL LIFE TABLES

Authority	Territory	Date	Expectation of life at birth (in years)		
			Males	Females	All persons
Halley	Breslau (Germany)	1687-1691			33.5
Price	Northampton (England)	1735-1780			30.0
Milne	Carlisle (England)	1779-1787			38.7
Wigglesworth	Massachusetts and New Hampshire	1789			35.5
Pennsylvania Co. for Assurance Upon Lives.	Philadelphia	1814			26.0
Do.	Episcopal Church, United States.	1814			31.0
Official English life table No. 1.	England and Wales	1841	40.2	42.2	
Kennedy	Massachusetts	1850	38.3	40.5	
Do.	Maryland	1850	41.8	44.9	
Elliott	Massachusetts	1855			39.8
Meech	United States, white	1860	41.01		
Billings	Massachusetts	1878-1882	41.74	43.50	
United States life tables (Glover)	do.	1890	42.50	44.46	
Abbott	do.	1893-1897	44.09	46.61	
United States life tables (Glover)	do.	1901	46.07	49.42	
Do.	do.	1910	49.33	53.06	
Do.	United States Original Registration States, white.	1901	48.23	51.08	
Do.	do.	1909-1911	50.23	53.62	
Do.	do.	1919-1920	54.05	56.41	
Do.	United States Registration States, white.	1919-1920	55.33	57.52	
Official English life tables:					
No. 3.	England and Wales	1838-1854	39.91	41.85	
No. 4.	do.	1871-1880	41.35	44.62	
No. 5.	do.	1881-1890	43.06	47.18	45.39
No. 6.	do.	1891-1900	44.13	47.77	45.92
No. 7.	do.	1906	48.53	52.38	
No. 8.	do.	1911	51.50	55.35	
No. 9.	do.	1921	55.62	59.58	

Effect of Artificial Humidification upon Sickness Rates in the Cotton-Weaving Industry¹

A RECENT study by the British Industrial Fatigue Research Board of the effects of artificial humidification on the health of operatives in cotton mills was made because of the contention by the workers' organizations that work in the relatively hot and humid atmosphere of the mills which were artificially humidified was harmful to the workers.

A relatively high percentage of moisture in the air has long been considered essential for good weaving, and in England the localization of the industry in Lancashire was the result of the relatively moist air in that section. In weaving certain classes of cloth, however, the natural humidity was not considered to be sufficient to insure a satisfactory product, and it has been the practice to increase the humidity by injecting steam or atomized water into the air. This practice has been the subject of protests on the part of the workers since about 1870, and various official inquiries have been held. In 1889 the cotton cloth factories act set the maximum limits of humidity which were allowable in the atmosphere, but the weavers' associations were not satisfied, and, following their demands that the practice should be abolished, various regulations have been put into effect fixing the permissible degree of humidity and establishing standards for ventilation. The present regulations have been in force since 1911, but the question of the harmfulness of the practice has never been settled to the satisfaction of the workers, and the present inquiry was instituted to determine whether the conditions in the humid cotton-weaving sheds, besides causing discomfort, do actually contribute to the amount of ill health suffered by the workers.

The study was carried out in five towns. In three towns weaving sheds of both types—humid or "wet" sheds, and nonhumid or "dry" sheds—were found. In one town there were only dry sheds and in the other only wet sheds. By choosing towns in which both processes were in use and towns where only the one process was employed, sufficiently varied conditions were presented, it was considered, to offset the effect of factors such as differing housing conditions or the tendency of the better and stronger workers to seek work in the dry sheds rather than in the wet ones, as a selective process tending to produce a population in the wet sheds more liable to sickness than that found in the dry sheds would not be in evidence in towns in which the sheds were wholly wet or wholly dry.

The mills studied were agreed upon by representatives of the employers and employees. The employers cooperated by furnishing the names of their employees, the facts as to absences because of sickness, and the name of the approved society (under the national health insurance acts) to which each employee belonged. At the end of the year the cards containing the employees' records were submitted to the various insurance societies, which supplied for each weaver details of the sickness experienced during the year. Seventy-four firms, operating 128 sheds, cooperated in the study, which covered the year from August 1, 1925, to July 31, 1926. The number

¹ Great Britain. Industrial Fatigue Research Board. Report No. 48: Artificial humidification in the cotton-weaving industry—its effect upon the sickness rates of weaving operatives, by A. Bradford Hill. London, 1927.

of workers employed by these companies on August 1 was 20,133, of whom 4,971 were males and 15,162 females. The sickness experience of all these workers was secured for the entire year or for the part of the year that they remained in the employ of the company.

Comparison was made of all the sickness records which had been secured from the employers and the insurance societies. The mills were classified according to their temperature readings and the sickness experience of the employees correlated with these temperatures, and the sickness in the two types of sheds was analyzed by cause. The sickness experience of the more than 20,000 weavers whose records were analyzed did not show any decided difference between humid and nonhumid sheds. In the nonhumid sheds the average number of days lost from sickness by males per year of exposure was 8.18 days and in the humid sheds, 7.24 days; the rate for single or widowed females was 9.38 days in the nonhumid and 7.92 in the humid sheds; and for married females was 20.77 days in the nonhumid sheds and 19.96 in the humid sheds. In regard to specific diseases the humid environment did not seem to exert any adverse influence except in the group of respiratory diseases, and in this group it was only the males who were affected, the women showing no difference in sickness rates from respiratory causes in the humid and nonhumid groups.

The study shows, therefore, that there was no significant difference between the humid and the nonhumid sheds either in the number of days of sickness, in the number of claims made, or in the number of persons suffering from one or more sicknesses during the year of investigation. Although there was a slight excess of sickness in the nonhumid sheds and the number of days of sickness per claimant was longer, this difference was due to a few more very long claims in this group. Analysis of the sickness, town by town, also gave the same result—that is, the humid sheds were not found to possess a higher sickness incidence than the nonhumid sheds.

Special Aspects of the Declining Tuberculosis Death Rate in the United States

A STUDY by Louis I. Dublin and George H. Van Buren, reprinted from *Tubercle*, of October, 1927, deals with the extent to which the generally declining tuberculosis death rate in the United States touches different classes of the population.

The campaign against tuberculosis in this country has resulted in an immense decline in the crude death rate from this disease, but as this reduction might have taken place in certain sections of the country or among certain population or age groups it is of interest to determine just how successful the campaign has been in reaching the different economic classes. Until recently only 20 States have had a satisfactory registration system, so that in considering the question of the reduction in mortality from tuberculosis it is necessary to confine the study to these States.

The following table shows the death rates from tuberculosis among the rural and urban population for 20 States, 1910 and 1925, and the percentage of reduction in 1925:

DEATH RATES FROM TUBERCULOSIS (ALL FORMS) PER 100,000 POPULATION, RURAL AND URBAN, 1910 AND 1925, AND PER CENT OF REDUCTION IN 1925

State	Death rates per 100,000				Per cent of reduction in 1925 compared with 1910	
	1910		1925			
	Urban	Rural	Urban	Rural	Urban	Rural
California.....	225.9	130.9	125.7	163.3	44.4	9.7
Colorado.....	319.9	108.6	198.9	124.7	37.8	26.0
Connecticut.....	159.4	130.5	67.5	91.7	57.7	29.7
Indiana.....	195.1	165.1	81.3	82.9	58.3	49.8
Maine.....	180.4	140.7	60.9	64.1	66.2	54.4
Maryland.....	246.2	154.4	114.2	129.5	53.6	16.1
Massachusetts.....	158.6	177.2	74.0	120.7	53.3	31.9
Michigan.....	113.0	88.4	74.2	57.2	34.3	35.3
Minnesota.....	137.0	96.3	63.1	58.7	53.9	39.0
Montana.....	155.3	66.5	65.0	57.5	58.1	13.5
New Hampshire.....	154.1	123.3	55.1	74.5	64.2	39.6
New Jersey.....	193.6	160.1	64.3	107.8	66.8	32.7
New York.....	194.8	138.4	88.3	104.5	54.7	24.5
Ohio.....	173.8	131.9	78.4	69.2	54.9	47.5
Pennsylvania.....	160.8	109.0	82.3	71.6	48.8	34.3
Rhode Island.....	196.6	121.5	68.8	149.0	65.0	22.6
Utah.....	83.0	26.2	46.4	20.3	44.1	22.5
Vermont.....	160.4	106.6	129.3	61.8	19.4	42.0
Washington.....	123.4	94.3	68.6	88.3	44.4	6.4
Wisconsin.....	128.2	96.5	60.3	62.4	53.0	35.3

¹ Increase.

All of the States had decreased death rates over the 15-year period with the exception of rural Rhode Island, where there was an increase of 22.6 per cent in the rate. In several of the States, it will be noticed, the tuberculosis death rate was reduced more than half. It also appears from the figures that while there has been improvement in both the rural and the urban areas this improvement has been much greater in the cities. Among the 20 States included in the registration area of 1910, Massachusetts alone had a higher rural than urban tuberculosis death rate, but in 1925 the situation had changed so that 12 of the 20 States had higher rural death rates from this cause. In general, the declines in the cities were much larger than in the country, and only two States, Michigan and Vermont, have recorded relatively greater declines in the rural districts.

These figures are, however, crude and noncorrected rates which do not take into consideration nonresident deaths. The establishment of many tuberculosis sanitariums during the period, practically all of which are in the country, and the occurrence of many deaths of city dwellers in these institutions has made for a higher rural death rate. But in spite of this fact the improvement shown by the cities is so great that there can be little doubt that the improvement in the tuberculosis situation has been greater among the urban population. Although lacking complete data on which to base a comparison, it seems true, also, that there has been a similar decline in the death rate from tuberculosis among the colored population.

Data as to tuberculosis mortality within the various occupations depend upon a comparison of the ratios of death from tuberculosis to the total number of deaths from all causes. On this basis a general decline in practically all occupations is shown. The rate for tuberculosis of the lungs in the years 1911 to 1913 was 20.5 per cent of the mortality from all causes among gainfully occupied white males aged

15 and over, and in 1922-1924 the rate had been reduced to 13.4 per cent. The occupations showing the highest proportion of deaths were as follows, in the order named: Miners, underground (other than coal miners); pottery workers; marble and stone cutters; cooks, waiters, and hotel servants; cutlers and grinders; cigar makers and tobacco workers; laundry workers; compositors, printers, and pressmen; brass-foundry workers; barbers and hair dressers; the clerical occupations; and glass workers. Among these occupations, metal miners are the only ones which do not show a decline in the percentage of deaths and in fact the ratio is slightly higher than 10 years ago. This increase is so slight, however, that it is thought that a general reduction in deaths from other causes and from mining accidents may account for the apparent increase in deaths from tuberculosis.

A comparison of the death rate among the industrial population with that for the general population shows that the improvement has been greater among the wage-earning group, so that the mortality reduction has been greatest, among white persons at least, in the economic section of the population where the tuberculosis problem has always been most acute. To verify this point a comparison was made between the mortality experience of the millions of white persons insured in the industrial department of the Metropolitan Life Insurance Co. and the total population of the United States registration States. The industrial policyholders covered live almost altogether in the cities of the United States and Canada, where they form nearly one-third of the total industrial population. The comparison is made of persons between the ages 1 and 74. The death rate from tuberculosis among white males in the insured group was 230.9 per 100,000 in 1911, and in 1920, 120.8, a reduction of 47.7 per cent, while the death rate among males in the registration area for 1910 was 166.6 per 100,000 and in 1920, 121.1, a reduction of only 27.3 per cent. From 1920 to 1925 the tuberculosis mortality of males in these two groups continued a practically steady decline, the rate for the wage-earning group being 84.3 in 1925, or a reduction of 63.5 per cent since 1911, and that of the general population group being 92.4, a decline of only 44.5 per cent from the 1910 figure. A similar improvement is shown among white females, the rate for the industrial group in 1925 being 76.6 per 100,000, or a reduction of 53.7 per cent, and that of women in the general population 76, a reduction of 45.2 per cent. On this basis there were 21,500 fewer deaths from tuberculosis in 1926 among industrial policyholders than might have been expected if the 1911 rate had continued to prevail, and in the year 1925 there were 9,058 fewer deaths among members of this group than would have occurred if the improvement had been at the rate which prevailed among the general population.

These figures do not hold good for all age periods, however, and higher rates prevail among the industrial group between the ages 20 and 54. Between the ages 35 to 44 and 45 to 54 the death rates for males from tuberculosis are 39.6 per cent and 46 per cent greater than among males in the general population, and among females the rates are higher between these ages (20 to 54), although the greatest difference is between the ages 20 to 24, the age period at which the maximum death rate from tuberculosis among woman workers occurs.

After age 55 the rates continue higher among the male workers, while the women in the general population after this age have a higher rate than the women in the industrial group.

Considering the industrial population alone, there has been a great decline in the past 15 years in the rates for males during the most active period of their working lives and also when they have the largest number of children dependent upon them, this decline during the ages 35 to 44 amounting to 69.1 per cent. In view of the effect upon the home this is considered a social gain of the first order.

In summing up the causes for the great improvement in the tuberculosis situation shown by these figures, the writers state that the effectiveness of the organized campaign which the public health movement has conducted against this disease has been demonstrated. The people have been taught that tuberculosis can never be prevented or cured by the use of drugs, but that sunshine, fresh air, rest, and cleanliness are the great preventives. The improvement is due, also, to higher incomes, with resultant better home conditions among the wage-earning population. In spite of the great gains, however, the writers say that "the fact stands out that where the most has been done the most is still to be accomplished. More than one-half of all the deaths from tuberculosis occur between 20 and 45 years, and in this age range the mortality from the disease is still high among American wage earners. This is the age range, and this is the economic stratum of the population where the greatest reduction is still to be made."

Cases of Phosphorus Necrosis Reported by Johns Hopkins Hospital

THE hazard of phosphorus poisoning in the manufacture of fireworks¹ was the subject of an investigation by the Bureau of Labor Statistics in 1925. Of the 57 establishments manufacturing fireworks in the United States at that time, only 3 were found to be using white (yellow) phosphorus. These three plants were covered in the investigation, therefore, and a total of 18 cases of phosphorus necrosis among workers in these plants and in a phosphorus preparation plant were discovered. As a result of the findings of this investigation an agreement² was reached between the manufacturers and the Department of Labor that the manufacture of all types of fireworks containing white phosphorus should cease on or before August 15, 1926.

In spite of this fact, cases of phosphorus necrosis continue to be reported among workers who were exposed to the poison prior to the time the agreement went into effect. Two such cases were treated in Johns Hopkins Hospital during the past year. Both patients were colored girls, one of whom had a history of employment in a factory manufacturing fireworks before her first admission to the hospital in February, 1927, and whose case was diagnosed as phosphorus poisoning, and the other, without a definite history of exposure, was regarded as a possible case of phosphorus necrosis.

¹ U. S. Bureau of Labor Statistics Bul. No. 405: Phosphorus necrosis in the manufacture of fireworks and in the preparation of phosphorus.

² See Labor Review, September, 1926, p. 37.

The hospital record of the first case shows that the girl was first seen in the out-patient department February 11, 1927, where a diagnosis of osteomyelitis of the jaw, with abscess, was made. The right jaw had been swollen for three months before she applied for treatment, and part of that time the abscess had been open and draining. The X-ray report showed extensive involvement of the right lower jaw. The patient was under treatment, either in the hospital or in the out-patient department, practically continuously from February 11 to November 7, 1927, and during that time she was operated on four times. The operations included removal of all the teeth on the lower right jaw, removal of part of the infected bone and sequestrum, and finally removal of the entire left lower jaw. At the time she was last seen the sinus, which had formed at the angle of the jaw, was not healed but was draining freely.

A claim for compensation under the workmen's compensation act by this worker on the ground that the disease was contracted as a result of trying to alleviate toothache by rubbing her gums while handling white phosphorus was decided adversely by the Virginia Supreme Court of Appeals in January, 1928. The court held that this was an occupational disease, and the condition, therefore, could not be attributed to an accident.

Asthma Caused by Castor-Bean Dust

A REPORT of outbreaks of asthma occurring over a period of years in a certain section of Toledo, Ohio, is given in a recent issue of the *Journal of the American Medical Association*.¹

The existence of an "asthma colony" in East Toledo had been known to physicians of the city for some years, but although a linseed-oil mill in the district had been suspected of being the cause of the trouble, investigation by the city health department and the State department of health had failed to show the relationship between the mill and the asthmatic attacks occurring among the residents in the vicinity.

The mill in question manufactures both linseed oil and castor oil, and the residue after the oil is extracted from the castor bean is made into a fertilizer known as castor-bean pomace. In making the pomace the "cake" which is formed after the oil is pressed out is ground, and during this process there is considerable fine dust produced, which does not fall through the screen of the grinding mill but is carried out at the roof through pipes. When the mill was in operation, a fine cloud of this very fine and light dust could be seen issuing from these pipes.

The patients had always asserted that their attacks coincided with the odor of linseed oil from the mill when the wind was in the right direction, and because of this fact all the investigations had been directed to the linseed oil as the causative agent. The writers found, however, that after the oil was expressed from the flaxseed there was still about 9 per cent of oil in the seed, making it too heavy to be carried by the wind. As the castor-bean dust, which was

¹ *Journal of the American Medical Association*, Jan. 14, 1928: "Endemic asthma due to castor-bean dust," by Karl D. Figley, M. D., and Robert H. Elrod, M. D.

present in quantities, is practically odorless as compared with the linseed oil fumes, it had been entirely overlooked as a possible cause of the trouble.

The persons who had developed an asthmatic condition included numerous pupils in a school across the street from the oil mill and residents of the district within a radius of a mile from the mill. Of 32 individuals who reported for examination, 30 were found to have asthma at all times of the year. Their histories were quite similar, as none had had asthma before moving to the district and the attacks occurred at night among men who worked during the day at a distance from their homes and during either day or night among those who remained in the vicinity all the time. The attacks were most frequent during the spring and fall months, when the wind attained its greatest velocity, and the patients were most free from attacks during June, July, and August, when the mill was not run at night.

Sensitization tests showed that all of the persons examined reacted to castor-bean dust, while five gave cutaneous reactions to flaxseed, although in a lesser degree. In view of the fact that the cause seemed so well established and that removal of the cause would effect a cure, these persons were not treated, but the city health department ordered the mill to take steps to prevent the dissemination of the dust. An account of eight illustrative cases bringing out the factor of exposure to the dust at different times of the day or night and under different conditions includes one employee of the mill whose attacks became so frequent and severe that he had to give up his employment and find work at a safe distance from the mill.

Resolution on Preventive Medicine Adopted by National Safety Council¹

THE health service division of the National Safety Council at its sixteenth annual meeting, held in Chicago in September, adopted a resolution defining what was considered to be the proper scope of the work of industrial medical departments.

The resolution, which was drawn up by a committee appointed for that purpose after a session had been given over to a discussion of the question of how far medicine and surgery should go in industry, was as follows:

1. That this body believes that it is proper and right that industry, through its medical department, should take all steps possible along the lines of preventive medicine so far as the employee and his family are concerned. Sanitation, examination of the employee, and the general prevention of disease along the lines of health education and the general employee's welfare are not only proper but essential.
2. That it is the opinion of that conference that all accident cases occurring to the employee of a company in the course of his employment should receive proper surgical attention without limit under company supervision in an effort to promptly restore him to his usefulness.
3. That it is the consensus of opinion of this conference that so far as medical attention to the employee is concerned the policy of many corporations wherein they give diagnostic aid in cooperation with the families be indorsed and that the company lend every assistance to the family physician in returning this employee again to his work.

¹National Safety Council. Transactions, Sixteenth Annual Safety Congress, Chicago, Sept. 26-30, 1927, vol. 1, p. 249.

4. That it is the consensus of opinion of this conference, except in isolated points, wherein it is impossible for the employee to obtain proper medical and surgical attention, that it is not advisable for the family to receive medical attention either at a stipulated stipend or at the expense of the corporation.

Infective Jaundice Among Scotch Coal Miners

A REPORT¹ issued by the British Medical Research Council on cases of spirochætal jaundice among coal miners in Scotland gives the result of the researches carried out for the purpose of identifying the infective organism and the medium of infection.

The cases occurred among miners in "wet" mines and were similar to cases first reported among mine workers in Japan where the spirochætal origin of the disease was demonstrated by Japanese investigators in 1915. The disease occurred among soldiers during the war, especially among men in the trenches, and has been reported from countries in all parts of the world. An epidemic form of jaundice was first reported in the United States during the war of 1812, and there have been reports of repeated outbreaks in this country since 1857. It is considered probable, however, that not all of the epidemics reported at different times and places have been the same disease, but that two distinct types—epidemic jaundice and catarrhal jaundice—have been confused.

In the epidemic form which has been reported among coal miners and in other persons working near rat-infested areas, as well as among the soldiers in the trenches, the infective organism has been proved to be a genus of bacteria characterized by the presence of fine spirals throughout its length and incurved ends, which causes a form of jaundice accompanied by hemorrhages into the organs and tissues of the body. In 1916 an antispiochætal serum was developed which was used successfully to treat cases occurring among the soldiers in the trenches. The cases which form the subject of this report were first reported in the Scottish mines in 1923, and after several fatal cases had occurred some of this serum was used. It proved to be effective in spite of the fact that it was seven years old. A fresh supply of serum was produced through the immunization of horses against the spirochætes, and this serum has since been obtainable.

Since 1923, 17 cases of spirochætal jaundice, with 5 deaths, have occurred among coal miners and in all of Scotland 31 cases with 8 deaths, giving a mortality of 25 per cent, have been recorded. In the fatal cases death occurred in from 10 to 15 days after the onset of the disease.

The experimental investigations included the examination of rats caught in the area in which the cases occurred and experimental inoculation of guinea pigs with the infective material obtained from these animals. Thirty-six per cent of the rats caught in this region were found to be harboring this organism. It seemed probable, therefore, that the rats infesting the mines were the source of the infection, and the occurrence of the disease in persons working in such rat-infested areas as refuse dumps, piggeries, or breweries corroborated to some

¹ Great Britain. Medical Research Council. Spirochætal jaundice, by G. Buchanan, M. D. London, 1927.

extent this conclusion. A strain of the organism capable of producing the disease was also found in the roof slime of one of the mines in which cases of the infectious jaundice had occurred.

Autopsies were performed in six of the fatal cases occurring in persons. There was present in these cases a generalized intense yellow color of the skin, effusions of blood into the skin, and hemorrhages were widely distributed throughout the body and were particularly evident in the stomach. The kidneys showed marked degenerative changes and areas of necrosis were present in some instances, and the liver showed these changes but in lesser degree. In experimental animals death occurred in from 5 to 12 days after inoculation, and the signs of the disease were similar to those observed in the persons dying of the disease, but the blood infection was demonstrated more readily in animals than in man.

Experimental modes of infection were observed in the guinea pig, and it appeared that from the working conditions in coal mines and the condition of the workers, human infection occurs as a result of the organism gaining entrance through abrasions of the skin or by way of the eye or the nasal mucosa, from contaminated hands, while infection by ingestion seems to be a less likely mode of infection.

Measures of prevention advocated are immunization through inoculation with a vaccine made from cultures of the organism. This method was successfully employed on a large scale in Japan. In agricultural regions where the disease is endemic the use of calcium cyanamide or lime nitrogen on the soil is advocated, and in coal mines the extermination of rats so far as possible and the drainage of mines are considered the most important preventive measures.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE

Workmen's Compensation and the Conflict of Laws^a

By RALPH H. DWAN, ASSISTANT PROFESSOR OF LAW, UNIVERSITY OF MINNESOTA

LITIGATION arising out of the application of workmen's compensation acts¹ during the last two decades has written a new chapter in Anglo-American conflict of laws. During the last 15 years, workmen's compensation legislation has swept this country. Few States have failed to embark upon this social experiment.² Almost every new session of the various legislatures brings more or less important changes.

The possible questions are large in number. This paper merely purports to deal with those which have arisen in English and American reported cases. It is proposed to organize and classify the available material³ with some few comments.

I. Is a Compensation Award in One State Entitled to Full Faith and Credit in Other States?

CERTAIN phases of this problem already have been raised in the courts. Two recent cases are *Schendel v. Chicago, R. I. & P. Ry. Co.*⁴ and *Elder v. Chicago, R. I. & P. Ry. Co.*⁵ In both, the decedent was killed in Iowa.⁶ In the *Schendel* case, an action was brought in the State district court of Minnesota under the Federal employers' liability act. Shortly thereafter the defendant instituted a proceeding in Iowa under the Iowa compensation act for arbitration. In that proceeding it was answered that the decedent was employed in interstate commerce and that hence the Iowa act did not apply. The arbitrators found that the decedent was engaged in intrastate commerce and made a compensation award. On review by the industrial commissioner the award was approved.

^a Reprinted, with permission, from *Minnesota Law Review*, March, 1927, with some changes by the author to take into account the American cases reported before January 1, 1928.

¹ Hereafter, except in quotations, the term "act" will be used to mean workmen's compensation act unless otherwise qualified.

² On December 1, 1925, there were acts in 42 States and 3 Territories. (Jones, on Workmen's Compensation Laws in the United States and Territories, published by the Workmen's Compensation Publicity Bureau, 9th ed., p. 5.) Since then, an act has come into effect in Missouri. (See U. S. Bureau of Labor Statistics Bul. No. 423, p. 306.)

³ No systematic attempt has been made to follow up any statutory changes which may have been made since the last reported decision in a particular jurisdiction. Likewise, such statutes as are cited have been followed up only to the extent of the means available to the writer.

⁴ (1925) 163 Minn. 460, 204 N. W. 552.

⁵ (1925) 163 Minn. 457, 204 N. W. 557.

⁶ The facts of both cases, as stated, are derived from the State reports and from the *Supreme Court Reporter*.

On appeal to the Iowa district court final judgment was entered affirming the award. Thereafter, the action in the Minnesota district court was heard, and, in spite of a plea of *res judicata*, judgment was rendered for the plaintiff. The facts in the Elder case were practically the same except that after the award in the Iowa proceedings there had been an application under the Iowa act for a review by the industrial commissioner and no action had been taken upon that application when the judgment was rendered in the Minnesota district court. From both judgments there was an appeal in which the action of the Minnesota district court in refusing to give effect to the Iowa judgment and decision was assigned as error and challenged as denying them the full faith and credit enjoined by the Federal Constitution.⁷ The Minnesota Supreme Court affirmed both judgments. On certiorari, the United States Supreme Court⁸ reversed the judgment in the Schendel case but affirmed the judgment in the Elder case. The decision in the Elder case was based upon the fact that the Iowa decision had not ripened into an enforceable award.

It is of importance to notice that the United States Supreme Court expressly refused to pass upon the effect of the Iowa award in the Elder case if it had become an enforceable award upon review by the industrial commissioner. In the Schendel case there was a judgment in an Iowa court of record.

Is, then, an enforceable award under a compensation act entitled to full faith and credit even though the award was made by an administrative tribunal and not reduced to judgment in a court of record? The cases just discussed do not pass upon that question. However, there would seem to be no valid reason for not so holding if the award satisfies the requisites which a judgment must satisfy to be entitled to full faith and credit. In fact, such faith and credit were given to an award of the Texas Industrial Accident Board in a New York case.⁹

II. Will a Right to Compensation Arising Under the Act of One Jurisdiction be Enforced Directly in Another Jurisdiction?

THE nature of this problem has been stated clearly by Judge Kenyon in these words:¹⁰

Is the right of compensation created by the State * * * in its workmen's compensation law so inseparable from and united with the remedy provided as to make its enforcement in a particular method and in a particular tribunal necessary? Its solution requires consideration of the statutes involved.

The possibilities of enforcement in other jurisdictions under a certain type of act are shown by two recent Federal cases: *United Dredging Co. v. Lindberg*,¹¹ and *Texas Pipe Line Co. v. Ware*.¹² In both cases an action was brought in another jurisdiction to enforce a right of recovery under the Louisiana act, and in both cases the action was successful.

⁷ Art. 4, 270 U. S. 611, sec. 1.

⁸ (1926) 770 U. S. 611, 46 Sup. Ct. 420, noted in 40 Harv. L. Rev. 766, 4 Wis. L. Rev. 175.

⁹ *In re Phillips* (1923), 206 App. Div. 314, 200 N. Y. S. 639.

¹¹ *Texas Pipe Line Co. v. Ware* (C. C. A. 8th Cir. 1926), 15 F. (2d) 171, 173.

¹² (C. C. A. 5th Cir. 1927) 18 F. (2d) 453.

¹³ (C. C. A. 8th Cir. 1926) 15 F. (2d) 171.

In the Ware case, Judge Kenyon, after stating the real question (as above quoted), pointed out that the remedy provided under the Louisiana act is in the regular courts. He admitted that there may be some few provisions of the act which might be carried out more easily in the courts of Louisiana but did not regard such difficulties as insuperable. In fact, as the court pointed out, if the right created possesses the necessary characteristics of a transitory cause of action, any attempt by the legislature to restrict its enforcement to that State would be abortive.¹³

Judge Kenyon was careful to distinguish this case from cases involving an act under which the remedies are before an administrative tribunal. The leading case involving such a situation is *Logan v. Missouri Valley Bridge & Iron Co.*,¹⁴ where an unsuccessful attempt was made to recover in Arkansas on a claim arising under the Oklahoma act. The court stated that there were no judicial processes in Arkansas that could be adapted to the enforcement of the provisions of the Oklahoma act. A like holding and similar reasoning are found in a recent case in North Carolina.¹⁵ The inference is that the result might be different if there were substantially similar administrative processes available in the forum.

III. When Does the Local Act Apply? Herein of the So-Called Extraterritorial Operation of the Acts

UNDER this heading it is proposed to discuss only a limited class of cases, viz, those where the sole conflict of laws question is whether the local act applies under the facts.¹⁶

¹³ *Tennessee Coal Co. v. George* (1914), 233 U. S. 354, 34 Sup. Ct. 587, 58 L. Ed. 997, L. R. A. 1916D 685.

This makes quite inexplicable an earlier Federal case, *Martin v. Kennecott Copper Corporation* (D. C. Wash. 1918), 252 Fed. 207. In that case, recovery under the Alaska act was denied because of provisions in the act that the action should be brought only in the courts of the Territory.

In another recent Federal case, an action against the insurer under the Oregon act in the Federal district court for the district of Oregon was successful, and was sustained on appeal. No objection appears to have been taken to the jurisdiction of the court. (*Zurich General Accident & Liability Insurance Co. v. Brunson* (C. C. A. 9th Cir. 1926), 15 F. (2d) 906.) In *Associated Industrial Ins. Co. v. Ellis* (D. C. Tex. 1926), 16 F. (2d) 464, discussed in 5 Tex. L. Rev. 448, a plea to the jurisdiction of the Federal Court of the Northern District of Texas in a suit to set aside an award of the Texas Industrial Board was overruled.

¹⁴ (1923) 157 Ark. 528, 249 S. W. 21.

Like holdings are: *Lehmann v. Ramo Films (Inc.)* (1915), 92 Misc. 418, 155 N. Y. S. 1032; *McCarthy v. McAllister Steamboat Co.* (1916), 94 Misc. 692, 158 N. Y. S. 563; *Verdicchio v. McNab & Harlin Mfg. Co.* (1917), 178 App. Div. 48, 164 N. Y. S. 290. See also *Resigno v. F. Jerka Co.* (1927), 221 App. Div. 214, 223 N. Y. S. 5.

In *Pensabene v. F. & J. Auditore Co.* (1913), 155 App. Div. 368, 140 N. Y. S. 266, motion for leave to appeal denied in 156 App. Div. 888, 140 N. Y. S. 1134, a suit was brought in New York on a claim under the New Jersey act. Recovery was denied on the ground that the New Jersey act only purported to apply when the contract of hiring was made in New Jersey, and that no such hiring was set up in the complaint.

In *Mosely v. Empire Gas & Fuel Co.* (Mo. 1926), 281 S. W. 762, 45 A. L. R. 1223, an action in Missouri based upon the Kansas act was unsuccessful. The court said (281 S. W. 762, 768):

"By that statute the right and remedy are so united, and the provision for liability is so coupled with a provision for a special remedy to be administered by a designated tribunal with certain specific powers given, that the remedy must be sought in the designated tribunal."

Cf. an earlier Missouri case, the reasoning of which is less supportable: *Harbis v. Cudahy Packing Co.* (1921), 211 Mo. App. 188, 241 S. W. 960, certiorari quashed (1922), 292 Mo. 333, 238 S. W. 809.

¹⁵ *Johnson v. Carolina, etc., Ry. Co.* (1926), 191 N. C. 75, 83, 131 S. E. 390.

¹⁶ Much has been written upon this question. See particularly Angell, *Workmen's Compensation for Injury Abroad*, 31 Harv. L. Rev. 619; 37 Harv. L. Rev. 375; 22 Columbia L. Rev. 263; 30 Yale L. Jour. 71; 21 Mich. L. Rev. 449; 9 Calif. L. Rev. 230; 7 Iowa L. Bul. 166; 3 Nebr. L. Bul. 295; Bradbury, *Workmen's Compensation*, 3d ed., Ch. VII, p. 82; 1 Honnold, *Workmen's Compensation*, 32, sec. 8; Harper on *Workmen's Compensation*, 2d ed., sec. 124; Goodrich on *Conflict of Laws*, p. 202 et. seq.; 20 N. C. C. A. 621; 45 A. L. R. 1234.

As to the English law, see Elliott, *Workmen's Compensation Acts*, 8th ed., p. 2; Knowles, *Law Relating to Workmen's Compensation*, 4th ed., p. 8.

The cases often stress the fact that a particular act is "elective"¹⁷ or is "compulsory." The meaning of this classification and the extent and scope of the two classes are expressed as of July 1, 1926, by a bulletin of the United States Bureau of Labor Statistics¹⁸ as follows:

In most States (32) the employer and employee may exercise a choice as to accepting the provisions of the compensation law. Election by the employer is presumed in a majority of the States, but in 10 positive action is required. Where the employer rejects the law, actions for damages may be brought without the customary common-law defenses. Where he elects to accept the provisions of the law, the acceptance by the employee is taken for granted, in the absence of rejection, except in Kentucky, where positive acceptance is required. In New Hampshire the employee may make his choice of remedy after the injury has been received. If the employer has accepted and the employee rejects the law, actions for damages are subject to the common-law defenses, except in two States (New Jersey and Pennsylvania), where the defenses are abrogated absolutely.

The laws are compulsory in 14 States, neither employer nor employee having the option of choosing another remedy, except in Arizona, where a workman may elect prior to the injury not to come under the act. Suit is permitted in a number of States if the employer has failed to insure or permits premiums to remain unpaid.

The importance sometimes attached by the courts to the distinction between these two types of acts justifies some discussion of the matter. In view of the coercion exercised upon both the employer and employee in most of the "elective" acts by the juggling of the common-law defenses, it was early seen by commentators on the subject¹⁹ that such acts were elective in form only and that such form was used to escape a fancied constitutional difficulty. Such acts have been characterized as "pseudo-elective" and as being "a piece of legislative trickery."

In the subsequent discussion, it will be seen that the word "extra-territorial" is often used with reference to the operation of the acts in some of the cases. If all that is meant is that a certain act has been applied to accidents occurring outside the State, the term is at least descriptive. But the use of the term is unfortunate because of its other meaning, viz, the application of the law of a State to matters which had no connection with such State. Few if any of the cases involved such a situation.

What is the nature of this problem? Under the act of a given jurisdiction, the liability of the employer has been subjected to radical change. Under what circumstance does the act apply? If the act is explicit on the matter, there is no difficulty. There can be no doubt that the legislature has the power, aside from possible constitutional limitations, to attach legal consequences to any acts done within or, indeed, without its territorial limits.²⁰ The courts of that jurisdiction, at least, must heed such legislative mandates. The difficulty arises when the act contains little or no provision for this matter. Then the act must be interpreted. It is not only possible but in accord with common-law principles for the court to turn to

¹⁷ Sometimes called "optional."

¹⁸ Bul. No. 423: Workmen's Compensation Legislation of the United States and Canada as of July 1, 1926. The excerpts are from pp. 9, 10.

¹⁹ See Smith, *Sequel to Workmen's Compensation Acts*, 27 *Herv. L. Rev.* 235, 248, 249, and footnotes. See, also, the interesting opinion in *Ocean Acc. & Guarantee Corp. v. Industrial Comm.* (Ariz. 1927), 257 *Pac.* 644.

²⁰ See concurring opinion of Olney, J., in *Quong Ham Wah Co. v. Industrial Acc. Comm.* (1920), 184 *Calif.* 26, 44, 192 *Pac.* 1021, 12 *A. L. R.* 1190.

common-law analogies to aid it in this task of adding a judicial gloss to the act if such analogies are sufficiently close. Conceivable analogies are the conflict of laws rule as to what law governs tort liability, or the rules as to what law governs the contract of employment, or, better, the common-law tradition of imposing certain incidents upon the relation of master and servant²¹ when the State has a sufficient interest in that relation.

To show how the courts have attacked this problem, a few typical cases will be discussed in some detail.

First, an illustration of the efficacy of explicit legislative provision on this matter is found in a California case, *Quong Ham Wah Co. v. Industrial Acc. Comm.*²² The act provided:

The commission shall have jurisdiction over all controversies arising out of injuries suffered without the territorial limits of this State in those cases where * * * the contract of hire was made in this State * * *.

In affirming an award made under this provision the court aptly described its operation as follows:²³

The contract creates a relationship under the sanction of the law, and the same law attaches as an incident thereto an obligation to compensate for injuries sustained abroad amounting to a sort of compulsory insurance. The legislature may lawfully impose that right and duty upon those operating under a contract subject to the legislative power, and no principle of law is defeated by attaching to such contracts the same duties and rights as incidents to acts abroad that are lawfully imposed as incidents to the same acts occurring within the geographical limits of the State.

Likewise, the English act provides for compensation for injuries abroad in certain occupations,²⁴ and such provisions have been applied.²⁵

Where the act is not explicit on this matter the decisions show much contrariety of opinion. Cases illustrating the various views will be discussed. Because of the advantages in tracing the development of a line of thought, the cases in a particular jurisdiction will be treated chronologically, as far as may be.

The English cases uniformly hold that the compulsory English act does not apply to the injuries abroad in cases where there is no express provision in the act for such application. The leading English

²¹ See Pound, *The Spirit of the Common Law*, 29-31.

²² (1920) 184 Calif. 26, 192 Pac. 1021, 12 A. L. R. 1190. Another application of the same provision of the act is found in *Globe Cotton Oil Mills v. Industrial Acc. Comm.* (1923), 64 Calif. App. 307, 221 Pac. 638; another is found in *Alaska Packers' Assn. v. Industrial Acc. Comm.* (Calif. 1927), 253 Pac. 926.

A similar statute was given a like construction in *Pickering v. Industrial Commission* (1921), 59 Utah, 35, 201 Pac. 1029. See, also, *Home Life & Accident Co. v. Orchard* (Tex. Civ. App. 1921), 227 S. W. 705; *Price v. Texas Employers' Ins. Assn.* (Tex. Comm. of App. 1927), 296 S. W. 284; *Empire Glass, etc., Co. v. Bussey* (1925), 33 Ga. App. 464, 126 S. E. 912.

In *Smith v. Van Noy Interstate Co.* (1924), 150 Tenn. 25, 262 S. W. 1048, 35 A. L. R. 1409, noted in 34 Yale L. Jour. 453, the contract of employment was made in Tennessee for work outside the State; the injury occurred outside the State. The act specifically provided for compensation for injuries abroad when there would be compensation had the accident happened in Tennessee if the contract of employment was made in Tennessee unless otherwise expressly provided in such contract. Yet, in holding the Tennessee act to apply the court seemed to disregard this express provision and to base its decision upon a course of reasoning large parts of which were taken, without indicating it, verbatim from a Michigan case where no such express statutory provision was involved. (*Crane v. Leonard, Crossette & Riley* (1921), 214 Mich. 218, 183 N. W. 204, 20 N. C. C. A. 621, cited *infra* note 34.)

²³ 184 Calif. 26, 36, 192 Pac. 1021, 12 A. L. R. 1190. The court used as to the liability imposed the unfortunate term "quasi ex contractu."

The California court previously had held that the "compulsory" California act, before this provision was inserted, did not apply when the injury occurred outside the State. (*North Alaska Salmon Co. v. Pillsbury* (1916), 174 Calif. 1, 162 Pac. 93, L. R. A. 1917E 642.)

²⁴ 6 Edw. 7, c. 58, sec. 7, extended the operation of the act to seamen injured abroad. By the amending act of 1923, 13 and 14 Geo. V., ch. 42, sec. 27, the act may be extended by order to crews of aircraft abroad. Such an order has been made. (See Elliott, *Workmen's Compensation Acts*, 8th ed., p. 691.)

²⁵ See Bradbury, *Workmen's Compensation*, 3d ed., p. 83.

case is *Tomalin v. S. Pearson & Son (Ltd.)*,²⁶ in which the contract of employment was made in England and the injury resulting in death occurred in Malta. The widow sought compensation. The act was held not to apply. The court pointed out that the widow was not a party to the contract and hence was simply claiming performance of a statutory duty, but went on to find that the act was not intended to operate beyond the territorial limits of the United Kingdom. This finding was based partly upon the presumption²⁷ that extraterritoriality was not intended by Parliament, and partly upon provisions of the act expressly extending the operation of the act to seamen injured abroad.²⁸

A similar result was reached in the first case in this country involving a claim for compensation for an injury occurring outside the State. In *Gould's case*,²⁹ the Massachusetts court took the same starting point that the English courts have taken, viz:

In the absence of unequivocal language to the contrary, it is not to be presumed that statutes respecting this matter are designed to control conduct or fix the rights of parties beyond the territorial limits of the State.

One of the reasons given by the court for its decision was that to hold otherwise would "give rise to many difficult questions of conflict of laws." This view has been called, somewhat inaptly, the "tort theory." It has had small following in this country.³⁰

In cases taking other views, importance frequently is attached to the "elective" or "compulsory" features of the act involved. This distinction already has been discussed to some extent.³¹ The cases under the "elective" acts will be considered first.

Largely because of being pioneers, the New Jersey cases have exerted much influence in this field. In *American Radiator Co. v. Rogge*³² the contract of employment was made in New York for employment in New York and New Jersey; the injury and death occurred in New Jersey. In holding the New Jersey act to apply, the court used this language:

The liability is indeed contractual in character by force of the very terms of the statute, but it is not the result of an express agreement between the parties; it is an

²⁶ (1909) 2 K. B. 61, 78 L. J. K. B. 863, 100 L. T. R. 685, 25 T. L. R. 457, 2 Butterworth's W. C. C. 1. An earlier case in the Dover County Court used a different method of reasoning. (*Hicks v. Maxton* (1907), 124 L. T. Jour. 135, 1 B. W. C. C. 150.) There the contract of employment was made in England and the injury occurred in France. The court, purporting to use the test of the intention of the parties, said that the *lex loci solutionis*, not the *lex loci contractus*, should govern.

The *Tomalin* case has been followed in *Schwartz v. India Rubber, etc., Co.* (1912), 2 K. B. 299, 81 L. J. K. B. 780, 106 L. T. R. 709, 28 T. L. R. 331, 5 B. W. C. C. 390. Dicta supporting the *Tomalin* case are found in *Krzus v. Crow's Nest Pass Coal Co. (Ltd.)* (1912), A. C. 590, 597, 81 L. J. P. C. 227, 107 L. T. R. 77, 28 T. L. R. 488, 6 B. W. C. C. 271; *Hunter v. Stadtische Hochseefischerei, etc.* (1925), 2 K. B. 493, 507, 18 B. W. C. C. 235.

It is true that the cases, except *Hicks v. Maxton*, do not cover the situation where the workman hired in Great Britain is himself seeking compensation for injuries abroad, but the text-writers take it to be settled that the act does not apply to injuries abroad save in the enumerated exceptions. (Knowles, *Law Relating to Workmen's Compensation*, 4th ed., p. 8; Elliott, *Workmen's Compensation Acts*, 8th ed., p. 2.)

²⁷ The court cited Maxwell on Interpretation of Statutes, 213.

²⁸ See note 24, *supra*.

²⁹ (1913) 215 Mass. 480, 102 N. E. 693, Ann. Cas. 1914D 372, 4 N. C. C. A. 60.

This case was followed in *Lemieux v. Boston & Maine R. R.* (1914), 219 Mass. 399, 106 N. E. 992.

³⁰ A similar view was taken in California prior to its statutory changes. (See note 23, *supra*.) Likewise, the Illinois act was at first held not to apply to injuries abroad. (*Union Bridge Co. v. Industrial Com.* (1919), 287 Ill. 396, 122 N. E. 609.) Later a provision was inserted in the act by which it applies to employments outside the State where the contract of hire is made within the State. (Ill. Laws, 1925, p. 380, sec. 5.)

³¹ See text to notes 18 and 19.

³² (1914) 86 N. J. L. 436, 92 Atl. 85, 94 Atl. 85, 7 N. C. C. A. 144, noted in 2 Va. L. Rev. 470; affirmed in the court of errors and appeals "for the reasons expressed by Mr. Justice Swayze in the supreme court," 87 N. J. L. 314, 93 Atl. 1083; writ of error to New Jersey Supreme Court dismissed for want of jurisdiction, 245 U. S. 630, 38 Sup. Ct. 63, 62 L. Ed. 520. This case was followed in *Davidheiser v. Hay Foundry & Iron Works* (1915), 87 N. J. L. 688, 94 Atl. 309; and in *West Jersey Trust Co. v. P. & R. Co.* (1915), 88 N. J. L. 102, 95 Atl. 753, reversed in 90 N. J. L. 730, 101 Atl. 1055, because interstate commerce involved.

agreement implied by the law, of a class now coming to be called in the more modern nomenclature of the books "quasi contracts."

This implied contract was said to be "one of the terms upon which the performance of a foreign contract of hiring shall be permitted in this State."

In the later case involving different facts, the New Jersey court did not qualify its words of contract. In *Rounsaville v. Central R. R. Co.*,³³ the contract of employment was made in New Jersey; the accident happened in Pennsylvania. In holding the New Jersey act applicable the court said that the question was the simple one of "whether a New Jersey court will enforce a New Jersey contract according to the terms of a New Jersey statute." In fact, the act was not explicit on this matter.

This "contract" theory has a wide following.³⁴ Its history and its complications in Connecticut are of particular interest. In *Kenner-son v. Thames Towboat Co.*³⁵ the contract of employment was made in Connecticut for performance partly within and partly without the State. The Connecticut act was held to apply. Considering the general purpose of the act and the difficulties which would arise for both the employers and employees if they could not be sure what act was to apply, the court found the local act to provide "for compensation arising out of a contract of employment authorized by our act for injuries suffered without our jurisdiction." In *Douthwright v. Champlin*³⁶ the contract of hire was made in Massachusetts. Certain work was to be done in Connecticut and both parties expressly accepted the Connecticut act. The Connecticut act was held to apply. The court stressed the fact that the Massachusetts act, under the holding in *Gould's case*,³⁷ did not apply to injuries outside of the State. It is of interest to notice the dictum of the court that the result would have been the same without the express acceptance if there had been absence of refusal. Then, said the court, the law would make the same addition to the contract. In *Banks v. Howlett*

³³ (1915) 87 N. J. L. 371, 94 Atl. 392; reversed in (1917) 90 N. J. L. 176, 101 Atl. 182, because the injury was in interstate commerce.

³⁴ In the following cases (other than those discussed elsewhere) the "contract theory" was used in holding the local act applicable when the injury occurred outside the State:

Colorado.—*Industrial Commission v. Aetna Life Ins. Co.* (1918), 64 Colo. 480, 174 Pac. 589, 3 A. L. R. 1336. The court made an interesting admission:

"The very purpose of the provision [denying in negligence cases the defenses of assumed risk, the fellow-servant rule, and contributory negligence] is to induce employers to accept the compensation law, in so denying such defenses. * * *"

Compare that statement with the text to notes 18 and 19.

[But recovery under the Colorado act has been denied when the injury occurred in Colorado but the contract was made elsewhere. (*Hall v. Ind. Comm.* (1925), 77 Colo. 338, 235 Pac. 1073.)]

Iowa.—*Pierce v. Bekins Van & Storage Co.* (1919), 185 Iowa, 1346, 172 N. W. 191. In this case it was argued (185 Iowa, 1346, 1360) that since the act provided (Iowa Code Supplement 1913, sec. 2477-m 29) that the hearings should be held in the place where the injury occurred, and since they could not be held outside the State the act could not apply to injuries occurring outside the State. The force of this argument was denied by the court. The basis for the argument has been removed by express provisions for the place of hearing when the injury occurred outside the State. (Iowa Laws 1919, ch. 220, sec. 8; Iowa Code 1924, sec. 1440.)

Michigan.—*Crane v. Leonard, Crossette & Riley* (1921), 214 Mich. 218, 183 N. W. 204, 20 N. C. C. A. 621. This case was followed in *Hulswit v. Escanaba Mfg. Co.* (1922), 218 Mich. 331, 188 N. W. 411. The present act expressly applies to injuries abroad "in those cases where the injured employee is a resident of this State at the time of the injury and the contract of hire was made in this State. * * *" (Acts of 1921, No. 173, pt. III.) Query whether the restriction as to residents is constitutional. (Compare *Quong Ham Wah Co. v. Ind. Acc. Comm.* (1920), 184 Cal. 26, 192 Pac. 1021, 12 A. L. R. 1190.)

Rhode Island.—*Grinnell v. Wilkinson* (1916), 39 R. I. 447, 98 Atl. 103, L. R. A. 1917B 767, Ann. Cas. 1918B 618, noted in 1 Minn. L. Rev. 531.

West Virginia.—*Gooding v. Ott* (1916), 77 W. Va. 487, 87 S. E. 862, L. R. A. 1916D 637, noted in 3 Va. L. Rev. 552, 14 Mich. L. Rev. 524. This case was followed in *Foughty v. Ott* (1917), 80 W. Va. 88, 92 S. E. 143, where the requirement seemed to be made that the employment include work to be done in West Virginia.

³⁵ (1915) 89 Conn. 367, 94 Atl. 372, L. R. A. 1916A 436. There was also an admiralty question involved in the case.

³⁶ (1917) 91 Conn. 524, 100 Atl. 97, Ann. Cas. 1917E 512, 15 N. C. C. A. 870, noted in 27 Yale L. Jour. 113.

³⁷ (1913) 215 Mass. 480, 102 N. E. 693, Ann. Cas. 1914D 372, 4 N. C. C. A. 60. See text to note 29 supra.

Co.,³⁸ as the court construed the facts, the contract was made in New York for services in Connecticut where the injury occurred. Again the Connecticut act was held to apply. The court said that since the contract was made with specific reference to services in Connecticut, it had incorporated in it automatically the provisions for compensation in the Connecticut act. The last case was carefully limited to its facts in *Hopkins v. Matchless Metal Polish Co.*³⁹ There the contract was made in New Jersey contemplating services in Connecticut, Massachusetts, and New York; the injury occurred in Connecticut. The Connecticut act was held not to apply.

In the course of its opinion the court supported its contract theory against the charge that such a construction prevents a later amendment of the act from becoming part of the contract. The court answered:

We think this a misconception of the effect of the election by an employer or employee. His election, as a matter of law, incorporates the provisions of the act and any subsequent amendments thereto as a part of the contract. No violation of a right of contract can arise out of this, since it is by his own election that the act and subsequent amendments are incorporated in his contract.

The theoretical difficulties involved in this course of decision in Connecticut were recognized in *Pettiti v. T. J. Pardy Const. Co.*⁴⁰ There the contract was made in Connecticut with the "specific and sole subject of that contract being performed in Massachusetts," where the injury occurred. In holding the Connecticut act to apply the court expressly overruled the *Banks* case.⁴¹

This "contract theory" has led the Indiana courts also into difficulties. In *Carl Hagenback, etc., Shows Co. v. Leppert*,⁴² the contract was made in Indiana; the injury occurred in Illinois. The act expressly provided that with certain exceptions every employer and employee under the act "shall be bound by the provisions of the act whether injury * * * occurs within the State or in some other State * * *." Yet, in holding the Indiana act to apply, the court talked of the right as being contractual. In *Hagenback, etc., Show Co. v. Randall*,⁴³ the contract made in Ohio expressly provided that with reference to employer's liability acts and other matters the laws of the District of Columbia should govern the contract; the injury occurred in Indiana. The employer, an Indiana corporation with offices in Indianapolis, was in the show business. The employment was for work in many States, including Indiana. The Indiana act was held to apply. The court pointed out that under the Indiana act "acceptance" was presumed in the absence of notice to the contrary, which notice was never given. The court reasoned that the act expressed the public policy of the State and that the court would not enforce a contract contravening that policy. The court said that the obligation under the Indiana act was "superimposed upon the Ohio contract as a condition of its performance in this State." In *Darsch*

³⁸ (1918) 92 Conn. 368, 102 Atl. 822, noted in 27 Yale L. Jour. 707.

³⁹ (1923) 99 Conn. 457, 121 Atl. 828.

⁴⁰ (1925) 103 Conn. 101, 130 Atl. 70, noted in 35 Yale L. Jour. 118.

⁴¹ See note 38, *supra*.

⁴² (1917) 66 Ind. App. 261, 117 N. E. 531.

⁴³ (1920) 75 Ind. App. 417, 126 N. E. 501. This case was followed in *Hagenback, etc., Show Co. v. Ball* (1920), 75 Ind. App. 454, 126 N. E. 504.

v. Thearle Duffield, etc. Co.,⁴⁴ both parties were residents of Illinois, where the contract was made; the injury occurred in Indiana while the employee was only temporarily in that State. In holding the Indiana commission to be without jurisdiction to make an award the court said that the provisions of the Indiana act as to presumed acceptance were "intended only to apply to such persons as were residents of this State and made their contracts of employment here, or made such contract[s] with reference to their performance, at least in part, within this State, or maintained an office and place for doing business within this State." In *Johns Manville (Inc.) v. Thrane*,⁴⁵ the contract was made in Illinois or Indiana (the court said it was immaterial) contemplating performance in Indiana, where the injury occurred. The employer was an "Indiana employer"; the employee was an "Indiana employee." In holding the Indiana act to apply the court stressed the fact that the contract was to be performed in Indiana. In *Bement Oil Corporation v. Cubbison*,⁴⁶ the contract was not made in Indiana, nor was it to be performed there; the injury occurred in Arkansas. The Indiana act was held not to apply. The court said that the fact that the employer maintained its principal place of business in Indiana and that the employee was a resident of Indiana did not make the Indiana act applicable, and intimated that to hold it applicable on that basis would violate the "privileges and immunities" clause⁴⁷ of the Federal Constitution. To add to the confusion, there is the recent case of *Leader Specialty Co. v. Chapman*.⁴⁸ There the contract was made by correspondence, the offer being sent from Indiana and the acceptance being mailed from South Carolina. The work was to be done in Georgia. It does not appear where the injury occurred. In holding the Indiana board to be without jurisdiction, the court said that the parties might have contracted that their rights be governed by Indiana law, but had not done so; that the presumption is that the contract was made with reference to Georgia law, and that hence the remedy was under the law of Georgia.

This résumé of the use of the "contract theory" in the jurisdictions which have given it its greatest development indicates the ramifications of the theory and some of the absurdities in reasoning to which it has led. At the risk of repetition, it may be worth while to state some of the reasons why the theory is based upon a fiction. This has been well stated as follows:⁴⁹

The assent is ordinarily conclusively presumed in the absence of notice to the contrary. Moreover, certain penalties are attached to the election not to adopt the act. It is still harder to say that the parties agree to accept subsequent amendments. And to work out a consideration for the opportunity usually afforded to one or both parties to withdraw at any time before injury demands more fiction.

Other reasons suggest themselves. For example, the parties can not contract out of any particular provisions of the act.

⁴⁴ (1922) 77 Ind. App. 357, 133 N. E. 525. This case was followed in a recent case under similar facts. (*Norman v. Hartman Furniture & Carpet Co.* (Ind. App. 1926), 150 N. E. 416.)

⁴⁵ (1923) 80 Ind. App. 432, 141 N. E. 229.

⁴⁶ (Ind. App. 1925) 140 N. E. 919.

⁴⁷ Art. 4, sec. 2. Cf. *Quong Ham Wah Co. v. Industrial Acc. Comm.* (1920), 184 Cal. 26, 192 Pac. 1021, 12 A. L. R. 1190.

⁴⁸ (Ind. App. 1926) 152 N. E. 872.

⁴⁹ 37 Harv. L. Rev. 375, 376. See, also, *Smith, Sequel to Workmen's Compensation Acts*, 27 Harv. L. Rev. 235, 248.

The cases in a few more jurisdictions with "elective" acts remain to be discussed. Minnesota has developed and followed consistently a theory of its own. In the first case, *State ex rel. Lena Chambers v. District Court*,⁵⁰ the contract was made in Minnesota where the business of the employer was centralized; the injury occurred in North Dakota. In holding the Minnesota act to apply, the court, after mentioning but not stressing the contract obligation arising under the act, went on to say:

When a business is localized in a State there is nothing inconsistent with the principle of the compensation act in requiring the employer to compensate for injuries in a service incident to its conduct sustained beyond the borders of the State.

This "localization" theory has been followed in a number of cases.⁵¹ It is of interest to notice, however, that in every case so far the court has been able to find that the business was localized in Minnesota. What will be done when a case arises in which such a finding can not be made remains to be seen.

The courts of Maine⁵² and Nebraska⁵³ have dealt with these questions without adhering to or adding any distinctive theory.

Next will be considered how the courts have treated this problem in States having "compulsory" acts.

In New York, where the act contains "compulsory" provisions relative to "hazardous" employments, the leading case is *Matter of Post v. Burger & Gohlke*.⁵⁴ There the contract of employment was made in New York where the employee worked regularly; the injury occurred in New Jersey on a temporary job. The New York act was held to apply. By construing the whole act the court found it to have been the intention of the legislature "to require that in every contract of employment in the cases provided by the act, there should be included and read into the contract the provisions of the act, and that such provisions should be applicable in every case of injury wherever the employee is engaged in the employment." Two later cases,⁵⁵ decided without opinion, seem to extend the rule of the *Post* Case to situations where the work contemplated by the contract was

⁵⁰ (1918) 139 Minn. 205, 166 N. W. 185, 3 A. L. R. 1347. For the subsequent history of this case, see (1919) 141 Minn. 348, 170 N. W. 218.

⁵¹ *State ex rel. Maryland Casualty Co. v. District Court* (1918), 140 Minn. 427, 168 N. W. 177, noted in 28 Yale L. Jour. 189; *Stansberry v. Monitor Stove Co.* (1921), 150 Minn. 1, 183 N. W. 977, 20 A. L. R. 316; *Krekelberg v. M. A. Floyd Co.* (1926), 166 Minn. 149, 207 N. W. 193, noted in 24 Mich. L. Rev. 738; *Ginsburg v. Byers* (1927), 171 Minn. 366, 214 N. W. 55, noted in 26 Mich. L. Rev. 211, where the employee was hired in Iowa but the injury occurred in Minnesota, where the business of the employer was "localized."

⁵² *Smith v. Heine Safety Boiler Co.* (1921), 119 Me. 552, 112 Atl. 516. The contract was made in Massachusetts; the injury occurred in Maine. The employee was a resident of New York; the employer was a foreign corporation. The claimant had applied for compensation in New York, where the New York act was held not to apply. (*Smith v. Heine Safety Boiler Co.*, *infra* note 58.) In holding the Maine act to apply, the court pointed out that the employer was carrying on business in Maine at the time of the accident, and such business was not of a casual or transitory character within the meaning of the act. The New York decision did not preclude the claimant since the New York court did not adjudicate upon the merits.

In *Saunders' Case* (Me., 1927), 136 Atl. 722, the contract was made in Maine with a Maine corporation; the injury occurred in Canada. The Maine act was held to apply by virtue of an express provision of the act.

⁵³ *McGuire v. Phelan-Shirley Co.* (1924), 111 Neb. 609, 197 N. W. 615, noted in 3 Neb. L. Bul. 295. The contract was made in Nebraska for work to be performed in Iowa where the injury occurred. The employee was a resident of Nebraska, and the employer's principal place of business was there. The Nebraska act was held to apply. The court said the act "should be so construed that technical refinements of interpretation will not be permitted to defeat it."

⁵⁴ (1916) 216 N. Y. 544, 111 N. E. 351, Ann. Cas. 1916B 158, 10 N. C. C. A. 888, noted in 3 Va. L. Rev. 552.

There is an earlier case which was decided upon a construction of a provision of the act as to a special situation. (*Edwardsen v. Jarvis Lighterage Co.* (1915), 168 App. Div. 368, 153 N. Y. S. 391.)

One of the cases applying the rule of the *Post* case is *Holmes v. Communipaw Steel Co.* (1919), 186 App. Div. 645, 174 N. Y. S. 722.

⁵⁵ *Klein v. Stoller & Cook Co.* (1917), 220 N. Y. 670, 116 N. E. 1055; *Fitzpatrick v. Blackall & Baldwin Co.* (1917), 220 N. Y. 671, 116 N. E. 1044.

entirely outside the State.⁵⁶ However, cases in the lower courts throw some doubt upon this.⁵⁷ A slight limitation was made in *Smith v. Heine Safety Boiler Co.*⁵⁸ There the contract was made in New York but before there was any act in New York. Also no hazardous business was carried on by the employer in New York at the time of the accident abroad. In fact, the plant was moved before the act was passed. The New York act was held not to apply. The court said that when the accident happened the employer "was subject to no duty to insure its employees under our law, except, indeed, such employees as it might send within our State." Judge Cardozo, in describing the nature of the liability under the act used the unfortunate term "quasi ex contractu." But he went on in excellent vein:

Contractual in a strict sense, of course, the liability is not. If the parties were to agree that it should not attach, the courts would disregard their agreement. A duty is imposed by law on employers conducting a hazardous employment in New York to insure their workmen against injury, and the insurance covers injuries incidental to that employment though suffered in another State. The contract creates the relation to which the law attaches the duty, and the same law which imposes the duty defines its orbit and its measure.

From these cases, it follows that there can be no recovery under the act when the contract was not made in New York and the injury was abroad.⁵⁹ The test, as it now seems to be, recently has been thus expressed,⁶⁰ "whether at the time of the accident the employer was carrying on a hazardous employment within the State of New York, and whether the claimant suffered an injury incidental to that employment, though suffered in another State." The decisions in the other recent cases⁶¹ follow from what is said above.

The courts of Ohio,⁶² North Dakota,⁶³ and Arizona,^{63a} also have dealt with this problem under "compulsory" acts.

⁵⁶ Support for this is also found in *Matter of Hoppers v. Hungerford-Smith Co.* (1921), 230 N. Y. 616, 130 N. E. 916, also decided without opinion. See, also, *Minto v. Hitchings & Co.* (1923), 204 App. Div. 661, 198 N. Y. S. 610.

⁵⁷ *Gardener v. Horseheads Const. Co.* (1926), 171 App. Div. 66, 156 N. Y. S. 899. That case is commented upon in *Minto v. Hitchings & Co.* (1923), 204 App. Div. 661, 198 N. Y. S. 610; *Thompson v. Foundation Co.* (1919), 188 App. Div. 506, 177 N. Y. S. 58; *Royal Indemnity Co. v. P. & W. Refining Co.* (1917), 98 Misc. 631, 634, 163 N. Y. S. 197.

Also in *Perlis v. Lederer* (1919), 189 App. Div. 425, 178 N. Y. S. 449, the act was held not to apply where the contract was made in New York for services to be performed wholly in another State. The court said that such a contract "is without the police power of the State of New York." Contra, *State Industrial Commission v. Barene* (1919), 107 Misc. 486, 177 N. Y. S. 689.

⁵⁸ (1918) 224 N. Y. 9, 119 N. E. 878, Ann. Cas. 1918D, 316.

⁵⁹ *Thompson v. Foundation Co.* (1919), 188 App. Div. 506, 177 N. Y. S. 58.

⁶⁰ *Donohue v. Robertson Co.* (1923), 205 App. Div. 176, 199 N. Y. S. 470.

⁶¹ See *Baggs v. Standard Oil Co.* (1920), 180 N. Y. S. 560; *Madderns v. Fox Film Co.* (1923), 205 App. Div. 791, 200 N. Y. S. 344.

⁶² In *Industrial Commission v. Ware* (1919), 10 Ohio App. 375, the employer was a contractor of Ohio and was a member of and participant in the State insurance fund of Ohio; the injury occurred in Kentucky. No averment was made that the contract was made in Ohio or that the labor was to be performed there. The Ohio act was held not to apply. The court said that to come within the policy of the statute the claimant must be an Ohio workman and must be either employed in Ohio or employed to work there. The court regarded the decision of the supreme court in this case (98 Ohio St. 458) as implying that the act may apply where the contract is made in Ohio for work partly or primarily in Ohio and the injury occurs while the workman is temporarily or casually out of the State.

⁶³ In *Altman v. North Dakota Workmen's Compensation Bureau* (1923), 50 N. D. 215, 195 N. W. 287, 28 A. L. R. 1337, the contract was made in North Dakota for labor to be performed in Washington where the injury occurred. The North Dakota act was held not to apply. The court stressed the fact that the employment in Washington was not merely incidental to employment in North Dakota. The court said: "The State, through the bureau, makes the necessary levies, called premiums, on employers, collects the fund, using the governmental machinery for the purpose, and disburses the same to employees within the law. There is nothing contractual in connection with the creation of the fund or the payment of benefits thereunder."

^{63a} In *Industrial Acc. & Guarantee Corp. v. Industrial Comm.* (Ariz. 1927), 257 Pac. 645, the contract was assumed to have been made in California; the injury occurred in Arizona. The Arizona act was held to apply. The court said that the Arizona act was not contractual but rather regulated the status of employer and employee within the State. As to the nature of the Arizona act, see text to note 18, supra.

To summarize, the courts have been faced again and again with the task of determining whether the local act applies in a given situation. In determining that question, there is properly no difficulty when the act is explicit with regard to that particular situation. But when the act is not explicit, the problem becomes one of interpretation. To aid them, the courts naturally have turned to analogies to be found in the general body of the law of conflict of laws.

It may be conceded that, subject to possible constitutional limitations, the legislature could provide for the extension of the operation of the act to matters having no connection with that jurisdiction, and that such a provision would be binding upon the courts of that jurisdiction. But in the absence of such an express provision, in view of orthodox Anglo-American theories of the territorial scope of the law of a particular jurisdiction, it is not surprising that the courts have sought to find some act or relation within the jurisdiction to which the act will attach legal consequences. However, in determining what it is to which those legal consequences will be attached, the courts have differed. Which view is the best the writer does not say. A suggestion as to the proper explanation of the cases holding the local act to apply, with varying limitations, when the contract of employment is made within the jurisdiction and the injury occurs abroad is offered. Where the act is compulsory, the view taken by the New York and California courts that the act imposes incidents upon the relation created by the contract, which contract is under the control of the State, is entirely sound.

With regard to the elective acts the cases under them must rest upon substantially the same basis. The fictional nature of the theory that there is a contract to come within the act in the sense of a consensual undertaking with the other requisites of a contract already has been discussed.⁶⁴ The only tenable theory, it is submitted, is that well expressed by the Wisconsin court:⁶⁵

Neither, in our opinion, does the fact that the law has an elective feature and is not compulsory materially affect the question. * * *

The liability of the employer under the act being statutory, the act enters into and becomes a part of every contract, not as a covenant thereof, but to the extent that the law of the land is a part of every contract.

The attitude of the court in construing the act is also enlightening. It pointed out that the language of the act did not expressly nor by necessary implication limit its operation to injuries occurring in the State; hence the legislative intent could be ascertained by a consideration of the legislative purpose, including the economic policy back of the act that an industry bear its own losses through injuries regardless of State lines.

IV. The Effect of the Receipt of Compensation Under the Act of One Jurisdiction Upon a Recovery Under the Act of Another Jurisdiction

THE cases discussed under the preceding heading have shown the possibility of the courts of two or more jurisdictions holding their own act to apply to the same injury.⁶⁶ Suppose that

⁶⁴ See text to note 49.

⁶⁵ *Anderson v. Miller Scrap Iron Co.* (1919), 169 Wis. 106, 113, 115, 170 N. W. 275, 171 N. W. 935; followed in *Zurich Acc. & Liability Ins. Co. v. Industrial Comm.* (Wis. 1927), 213 N. W. 630.

⁶⁶ See *Dodd, The Power of the Supreme Court to Review State Decisions in the Field of Conflict of Laws*, 39 Harv. L. Rev. 533, 542.

compensation payments are made under the act of one State, and later an award is made under the act of another State. What will the courts and administrative tribunals of the latter State do about such payments?

This problem has arisen in the courts of New York and has been disposed of cursorily. In *Jenkins v. Hogan & Sons (Inc.)*⁶⁷ the contract of employment was made in New York and the injury occurred in New Jersey. The claimant had accepted \$90 under the New Jersey act and had executed an affidavit of release. The New York act was held to apply and the receipt and release not to bar recovery. Provision, however, was made for the filing of the affidavit as a receipt for the payment of \$90. A further step was taken in *Gilbert v. Des Lauriers Column Mould Co.*,⁶⁸ in which the contract was made in New York and the injury occurred in New Jersey. The claimant made application for compensation under the New Jersey act and received some payments thereunder. Later an award was made in New York crediting the insurance carrier with the amount paid under the New Jersey proceeding. In affirming the award, the court said that the New Jersey proceeding did not deprive the New York commission of jurisdiction. In fact, the court expressed doubt whether the New Jersey commission ever had jurisdiction of the case. A limitation upon this doctrine was made in *Minto v. Hitchings & Co.*⁶⁹ There the claimant hired out in New Jersey with an employer who carried on his principal business there. The injury occurred in New York. The claimant applied for and was awarded compensation under the New Jersey act. Later he was awarded compensation under the New York act with deductions for the amounts paid under the New Jersey proceedings. The appellate division, apparently assuming that the New York act applied, reversed the award on the ground that the claimant was estopped from seeking like redress in New York. This case was itself limited to its facts in a most confusing opinion in *Anderson v. Jarrett Chambers Co.*,⁷⁰ where the findings of the board were that the contract was made in New York, the principal place of business of the employer, and the injury occurred in New Jersey. The acceptance of compensation under the New Jersey act was said not to bar a claim for compensation under the New York act. Final disposition of the case was not made, however.⁷¹

In connection with this matter, a dictum of the New Jersey court in *Rounsaville v. Central R. R. Co.*⁷² is of interest:

It is enough for the present to say that recovery of compensation in two States is no more illegal and is not necessarily more unjust than recovery upon two policies of accident or life insurance.

⁶⁷ (1917) 177 App. Div. 36, 163 N. Y. S. 707.

⁶⁸ (1917) 180 App. Div. 59, 167 N. Y. S. 274.

⁶⁹ (1923) 204 App. Div. 661, 198 N. Y. S. 610.

⁷⁰ (1924) 210 App. Div. 543, 206 N. Y. S. 458, noted in 10 Cornell L. Quart. 364.

⁷¹ The award was reversed and the claim remitted to the board because of insufficiency of the record to sustain the findings. No mention was made of crediting the sums paid under the New Jersey act, but such a statement was not called for as the case was presented to the court. For the subsequent disposition of the case, see (1925) 215 App. Div. 742, 212 N. Y. S. 765, affirming an award in favor of the claimant, affirmed in (1926) 242 N. Y. 580, 152 N. E. 435.

⁷² (1915) 87 N. J. L. 371, 374, 94 Atl. 392. For the subsequent disposition of this case see note 33, supra.

V. The Effect of the Local Act or the Act of Another Jurisdiction Upon a Common-Law Action for Damages or Some Other Action Not Based Upon a Workmen's Compensation Act

UNDER this heading cases in which other matters are involved, will not be considered. Those cases will be left to be stated under the next heading.

Except in the North Carolina cases, which will be considered presently, it uniformly has been held that any other form of relief will be denied if the plaintiff has a remedy under the act of another jurisdiction.⁷³ The theories used in determining whether the act of the other jurisdiction applies are as numerous as those used in determining the application of the local act. Thus, in *Johnson v. Nelson*⁷⁴ the contract of employment apparently was made in Minnesota to be performed in Wisconsin; the injury occurred in Wisconsin, the act of which the employer expressly had "accepted." Recovery in a common-law action for damages was denied on the ground that the sole remedy open to the plaintiff was under the Wisconsin act. The Minnesota court invoked the rule that matters pertaining to the performance of contracts are governed by the law of the place of performance, the rule that liability for torts is governed by the law of the place where the injury is inflicted, and the "acceptance" of the Wisconsin act by the employee by failure to give written notice of nonacceptance. A most interesting case is *Barnhart v. American Concrete Steel Co.*⁷⁵ There the contract was made in New Jersey with a New Jersey corporation; the injury occurred in New York. An action for wrongful death was brought in New York, and recovery was denied. The New York wrongful death statute applied only when the person killed had a common-law action. The court reasoned that under the New Jersey "optional" workmen's compensation act there was a contract in the strict sense under which the statutory scheme of compensation was substituted for the common-law remedies. This contract, not being opposed to the public policy of New York, barred this action.⁷⁶

The cases in North Carolina, which has no workmen's compensation act, require special treatment. In *Farr v. Babcock Lumber Co.*,⁷⁷ the contract was made in Tennessee; the injury occurred in North

⁷³ Cases involving the acts of foreign countries are: *Beyer v. Hamburg-American S. S. Co.* (C. C. N. Y. 1909), 171 Fed. 582; *Schweitzer v. Hamburg Am. Line* (1912), 78 Misc. 448, 138 N. Y. S. 944; *The Falco* (D. C. N. Y. 1926), 15 F. (2d) 604.

Some of the cases involving the acts of other States in this country are: *Shurtliff v. Oregon Short Line R. Co.* (1925), 66 Utah, 161, 241 Pac. 1058; *Albanese v. Stewart* (1912), 78 Misc. 581, 138 N. Y. S. 942; *Wasilewski v. Warner Sugar Refining Co.* (1914), 87 Misc. 156, 149 N. Y. S. 1035; *Pendar v. H. & B. American Mach. Co.* (1913), 35 R. I. 321, 87 Atl. 1, L. R. A. 1916A 428, 4 N. C. C. A. 600; *Bonner v. Tucker Stevedoring Co.* (1916), 25 Pa. Dist. Rep. 600; *Bozo v. Central Coal & Coke Co.* (1920), 57 Utah, 243, 193 Pac. 1111.

A fortiori, the same is true when the local act applies to the injury. (*Anderson v. Miller Scrap Iron Co.* (1919), 169 Wis. 106, 170 N. W. 275, 171 N. W. 935.) In *St. Louis-San Francisco R. Co. v. Carros* (1922), 207 Ala. 535, 93 So. 445, the contract was made in Alabama; the injury occurred in Mississippi. This was an action for damages. The Alabama act provided for compensation for injuries abroad when the contract was made in Alabama unless there was an express provision to the contrary in the contract. Judgment was rendered for the plaintiff. This judgment was affirmed on the ground that there was no pleading to raise the question of the effect of this provision of the act.

⁷⁴ (1915) 128 Minn. 158, 150 N. W. 620.

⁷⁵ (1920) 227 N. Y. 531, 125 N. E. 675. The opinion in the appellate division is noted in 18 Col. L. Rev.

377.

⁷⁶ An easier case reaching the same result is *Prdich v. N. Y. Cent. R. Co.* (1920), 111 Misc. 430, 183 N. Y. S. 77. The contract was made in New Jersey, and the death occurred there. The New Jersey wrongful death statute also applied only where the decedent would have had an action for damages if he had lived.

A similar case is *Anderson v. Standard Oil Co. of N. J.* (1925), 124 Misc. 829, 209 N. Y. S. 493. There the contract was made in New Jersey; the injury occurred on the Hudson River, death resulting in New Jersey. Suit was brought upon the New Jersey death statute. The complaint was dismissed on the ground that the sole remedy was under the New Jersey workmen's compensation act.

⁷⁷ (1921) 182 N. C. 725, 109 S. E. 833.

Carolina. This was a common-law action for damages. The defendant contended unsuccessfully that the contract was subject to the provisions of the Tennessee act and that the North Carolina court had no jurisdiction. The court said:

As now advised, especially in the absence of an opposing interpretation by the Supreme Court of Tennessee, we are of opinion that the sections of the workmen's compensation act cited and relied on by the defendant do not purport to interfere with the jurisdiction [of the North Carolina court].

In a recent case, *Johnson v. Carolina C. & O. Ry. Co.*,⁷⁸ the same court went even further. In that case not only was the contract made in Tennessee, but the injury occurred there. In holding that the plaintiff could maintain a common-law action for damages in North Carolina, the court used this strange language:

To hold that a citizen of this State, under such circumstances, had no remedy except that provided by the Tennessee compensation act in force in the State in which he was injured, having been induced to go there to work in an emergency, would be a denial of any remedy in the courts of this State. This court can not so hold.

Of course, where the court finds that the act of another jurisdiction⁷⁹ or of its own⁸⁰ does not apply to the injury, other relief will be granted.

VI. The Effect of the Local Act or the Act of Another Jurisdiction and Other Factors Upon a Common-Law Action for Damages or Some Other Action not Based Upon a Workmen's Compensation Act

UNDER this heading will be stated without comment a number of cases which show how complex are some of the questions which have arisen.

The fact that a plaintiff had received payments under the act of Illinois, in addition to a finding that the Illinois act applied to the injury, aided a Missouri court in denying recovery in a common-law action for damages.⁸¹

Three interesting cases are of sufficient similarity to be considered together. In *Hartford Acc. & Indem. Co. v. Chartrand*,⁸² the employment and injury were in New Jersey. Under the New Jersey act the employee was paid certain amounts by the plaintiff insurance company. Later the employee sued in New York the third person who had caused the injury, and recovered judgment. Prior to the payment of the judgment, a statement of the compensation agreement was filed with the judgment debtor. Under the New Jersey act, the insurance company then became entitled to receive from such third person a sum equivalent to the compensation payments. The money paid on the judgment being in New York under the jurisdiction of the supreme court, it made an order impressing an equitable lien on the proceeds of such judgment. This order was affirmed by the court of appeals on the ground that the common-law action for negligence arising in New Jersey was limited by this

⁷⁸ (1926) 191 N. C. 75, 131 S. E. 390, noted in 40 Harv. L. Rev. 130. With regard to another phase of this case, see the text to note 15.

⁷⁹ *Marra v. Hamburg-Am. P. A. Gesellschaft* (1917), 180 App. Div. 75, 167 N. Y. S. 74.

⁸⁰ *Hamm v. Rockwood Sprinkler Co.* (1916), 88 N. J. L. 564, 97 Atl. 730; *Reynolds v. Day* (1914), 79 Wash. 499, 140 Pac. 681, L. R. A. 1916A 432, 5 N. C. C. A. 814; *Cogliano v. Ferguson* (1917), 228 Mass. 147, 117 N. E. 45.

⁸¹ *Mitchell v. St. Louis Smelting & Refining Co.* (1919), 202 Mo. App. 251, 269, 215 S. W. 506.

⁸² (1924) 239 N. Y. 36, 145 N. E. 274, noted in 25 Col. L. Rev. 353; 34 Yale L. Jour. 441; 10 Cornell L. Quart. 364, 366.

provision of the act. The court was careful to say that there was no statutory lien. Instead, said the court:

The employer will be presumed to have received the money from the third party for the purpose of doing that which in law and good conscience he ought to do—return so much of it as he has received in advance under the workmen's compensation law of New Jersey, from his employer or the insurance carrier. Equity will impress upon the funds a lien in order to accomplish this purpose.

A slightly different situation was presented in *Reutenik v. Gibson Packing Co.*⁸³ There the employer was a corporation having its principal place of business in California. The employee was fatally injured by the defendant in Washington. The widow received in California an award for compensation of \$5,000. In this action the personal representative of the deceased sued under the Washington wrongful death statute, and the suit resulted in a verdict and judgment for \$9,000. The judgment awarded a lien thereon against the interest of the widow to the extent of the sum paid by the insurance company under the California award. The California act provided for such a lien. In affirming the judgment the court said that the California act and the construction thereof were part of the contract of insurance and that the provision for a lien in the California act was not prohibited by any law of Washington.

Another variation is found in *Rorvik v. Northern Pacific Lumber Co.*⁸⁴ There, apparently, the contract was made in California; the death occurred in Oregon. The widow brought an action under the Oregon employers' liability statute against the third person, the servants of which caused the death, and recovered a judgment for \$12,500. The defendant set up as a bar to the action an award of compensation of \$5,000 in California against the employer of the deceased. An appeal from the award was pending in California. Under the California act the making of such a claim operated as an assignment to the employer of the claimants' rights against third persons, subject to a duty in the employer to pay to the claimant any amount recovered in excess of the amount paid by the employer on the award. The judgment was affirmed on the theory that at the least the claimant was part owner of the cause of action and as such could sue on the refusal of the employer to do so, and that the employer was precluded from suing.

No better case with which to close this paper can be found than *Anderson v. Miller Scrap Iron Co.*,⁸⁵ not only because of the complexity of the questions involved, but also because of the clarity of thought shown in the opinion. In that case the contract of hire was made in Wisconsin; the injury occurred in Michigan. The action, based upon the Michigan survival statute, was brought by the administratrix of the estate of the decedent against the employer and its officer, one Miller, who caused the death. The plaintiff recovered a judgment for damages which was reversed on the ground that the Wisconsin act governed the liability arising out of the injury.⁸⁶

The subsequent history of the case is of interest. After the judgment was reversed, on remittitur, a motion was made to dismiss the action as to both defendants. No objection was made as to the

⁸³ (1924) 132 Wash. 108, 231 Pac. 773.

⁸⁴ (1921) 99 Oreg. 58, 190 Pac. 331, 195 Pac. 163.

⁸⁵ (1919) 169 Wis. 106, 170 N. W. 275, 171 N. W. 935.

⁸⁶ For the cogent reasoning of the court see the text to note 65.

employer, but both the plaintiff and the employer objected to the dismissal of Miller. But the motion was granted and the employer appealed. In the meantime the widow secured an award for compensation under the Wisconsin act.⁸⁷ On its appeal⁸⁸ the employer claimed to have acquired this cause of action against Miller by virtue of a provision in the Wisconsin act for assignment of tort actions after compensation was claimed. It was held that there could be no recovery as such assignee. The court said:⁸⁹

It is beyond the power of the legislature of this State to divert this action from the plaintiff administratrix. * * * To attribute power to our legislature to thus interfere with a cause of action springing from the statutes of another State is to accord to the enactments of the legislature of this State extraterritorial effect. It is beyond the power of the legislature of this State to provide that one person can assign a cause of action which belongs to another, or that any act on the part of one shall operate as an assignment of a cause of action arising under the laws of a sister State, and which the statutes of that State vest in another.

Conclusion

A FEW suggestions for improvement with regard to some of the problems discussed above will conclude this paper.

As to the scope of the act of a particular jurisdiction, there is need for legislative definition. The attempts of the courts to work this out by the use of common-law analogies has produced theoretical absurdities and practical harm because of uncertainty. The latter aspect of the situation is shown by the vast amount of litigation on the matter in the appellate courts alone. What the legislative definition should be the writer does not attempt to say. But the main desideratum should be certainty,⁹⁰ so that employers may arrange insurance and other matters accordingly and so that needless litigation may be prevented. Uniform legislation on the subject should be the ultimate aim.⁹¹ Workmen's compensation is of purely statutory origin, and therefore it is not unreasonable to ask for further legislation on this phase of such acts.

Another possible tool for improvement, suggested by the Anglo-French convention,⁹² is interstate agreements with the consent of Congress under the "compact" clause of the Federal Constitution.⁹³

The same methods of improvement may be used to advantage with regard to the problem of enforcing in one jurisdiction a right to compensation arising under the act of another jurisdiction.⁹⁴

⁸⁷ Affirmed on appeal in *Miller Scrap Iron Co. v. Boncher* (1921), 173 Wis. 257, 180 N. W. 826.

⁸⁸ *Anderson v. Miller Scrap Iron Co.* (1922), 176 Wis. 521, 182 N. W. 852, 187 N. W. 746.

⁸⁹ (1922) 176 Wis. 521, 532.

⁹⁰ A model of clearness and definiteness is the Pennsylvania act:

"This act shall * * * apply to all accidents occurring within this Commonwealth, irrespective of the place where the contract of hiring was made, renewed, or extended, and shall not apply to any accident occurring outside of the Commonwealth." (Pa. Laws 1915, act No. 338, Art. I, sec. 1.)

It is not without significance that no cases have been found involving the construction of that section.

⁹¹ The act proposed by the National Conference of Commissioners on Uniform State Laws contains some useful suggestions in this and other problems discussed in this paper. See particularly sections 4, 42.

⁹² This agreement deals with the recovery of compensation where British subjects are injured in France, and vice versa. This convention is attached as a schedule to a statute, 9 Edw. 7, c. 16, authorizing the effectuation of the convention by order in council. The order has been made. (See Elliott, *Workmen's Compensation Acts*, 8th ed., p. 689.) For the arrangements made for payment, see Knowles, *Law Relating to Workmen's Compensation*, 4th ed., p. 459.

The amending act of 1923 has facilitated like conventions with other countries. (13 and 14 Geo. V, c. 42, 26 (1).) Provision is made for orders in council to effectuate future conventions.

⁹³ Art. I, sec. 10. As to the use of that expedient in other fields, see Frankfurter and Landis, *The Compact Clause of the Constitution—A Study in Interstate Adjustments*, 34 Yale L. Jour. 685; Chafee, *Interstate Interpleader*, 33 Yale L. Jour. 685, 727.

⁹⁴ See the provision in section 42 of the act proposed by the National Conference of Commissioners on Uniform State Laws.

Perhaps the easiest and most needful reform is with regard to deductions for the receipt of compensation or the recovery of damages in another State. Just as are the New York cases⁹⁵ which allow deductions for payments of compensation under the act of another State, they are hard to support theoretically since in theory the two claims are upon separate and distinct statute-created rights.⁹⁶ Hence no question of *res judicata* in any accurate sense is involved.⁹⁷ Here again the same methods of reform are available. In fact, legislation upon this matter is not unknown.⁹⁸

The present Texas act provides for recovery of compensation where the employee was hired in Texas, even though the injury was received out of the State, but also provides that there shall be no recovery under the act if the employee "has elected to pursue his remedy and recovers in the courts of the State where such injury occurred." (Tex. Laws of 1927, ch. 259, sec. 1.)

Recent Workmen's Compensation Reports

Ohio

THE fifth annual report of the Department of Industrial Relations of Ohio contains statistics on workmen's compensation for the period from July 1, 1925, to June 30, 1926. Ohio has an exclusive State fund system, though self-insurance is permitted. The report is interesting principally because it shows the success of the State fund; it does not show the nature, nor the cause, of the injuries or deaths, nor the industry responsible.

At the close of the fiscal year there were 36,490 active risks, 351 being self-insurers. This is an increase of 2,862 over the preceding year. Claims filed with the department during the period totaled 207,103, 206,067 being nonfatal cases and 1,036 death cases.

The receipts by the State fund from all sources during the fiscal year totaled \$15,457,983. The disbursements totaled \$13,153,353. The difference of \$2,304,630 increased the balance to the credit of the fund on June 30, 1926, to \$49,959,992.

On May 14, 1926, the Industrial Commission of Ohio employed consulting actuaries to make an examination and an actuarial survey of the Ohio Workmen's Compensation Insurance Fund. The report of the actuaries is summarized to the effect that the State insurance fund is solvent, with a safety margin of 4 per cent as of December 1, 1925, the date to which the audit was made. This 4 per cent represents an unassigned surplus of \$2,002,923. The rates were found to be adequate. The expenses of the fund for the 12 months ending June 30, 1926, were only 3.8 per cent of the premiums. Comparative cost data contained in the report bring out the fact that Ohio's cost is lower than that of any of the other States mentioned, West Virginia being the next lowest (4.4 per cent), and New York highest (16.7 per cent). The average ratio of 65 stock companies is 38.9 per cent and

⁹⁵ See text to footnotes 67, 68, 69, 70, 71.

⁹⁶ Perhaps the act of a particular jurisdiction might be construed to limit the claimant to the recovery of a certain amount in whatever manner derived. The writer is indebted to Professor Beale for this suggestion. Such a construction would be unnecessary, of course, if there were express legislation or interstate agreement upon the matter.

⁹⁷ But see 10 Cornell L. Quart. 364, 366.

⁹⁸ See Ga. Laws 1920, act No. 814, sec. 37; Md. Laws 1922, ch. 529. Both of these provisions relate to the recovery of damages as well as the receipt of compensation.

that of 28 mutual companies 23.4 per cent. The report states that 36 cents on every dollar that would have been paid to insurance carriers for the year ending June 30, 1926, was saved to the people of Ohio.

Wisconsin

THE Industrial Commission of Wisconsin, in its publication Wisconsin Labor Statistics, Bulletin No. 5, reports on compensable injuries for the year 1926. Of the 22,177 cases closed by the industrial commission, 213 were deaths, 2 were permanent total disability injuries, 1,948 were permanent partial disability injuries, and 20,014 were temporary injuries. The total represented a loss of 3,146,254 working-days, \$3,725,860 compensation indemnity, and \$1,122,624¹ for medical aid. The table following is a summary of the leading accident causes in all cases of compensable injuries.

TABLE 1.—SUMMARY OF COMPENSABLE CASES CLOSED IN WISCONSIN IN CALENDAR YEAR 1926

Cause of injury	Deaths and permanent total disabilities	Permanent partial disabilities	Temporary disabilities	Total compensable injuries	Per cent of total	Total weighted days of time lost	Amount of compensation paid	Amount of medical aid paid
Handling objects.....	11	250	5,200	5,551	25.0	306,874	\$432,130	\$177,671
Machinery.....	13	931	2,845	3,789	17.1	776,060	819,629	167,490
Falls of persons.....	32	165	2,799	2,996	13.5	424,326	634,266	181,362
Stepping on or striking against objects.....	2	56	1,612	1,670	7.5	84,853	150,891	66,334
Hand tools.....	4	145	1,399	1,548	7.0	171,354	235,619	58,938
Falling objects.....	11	61	1,279	1,351	6.1	132,230	181,947	54,371
Occupational diseases.....	11	2	327	340	1.5	81,099	78,970	11,727
Other causes.....	131	338	4,463	4,932	22.2	1,169,458	1,192,408	274,472
Total.....	215	1,948	20,014	22,177	100.0	3,146,254	3,725,860	992,298

Bulletin No. 6 contains an interesting analysis of compensable occupational disease cases settled under the Wisconsin workmen's compensation act during the calendar year 1926. Table 2 summarizes some of the data given there.

TABLE 2.—SUMMARY OF OCCUPATIONAL DISEASES AND INJURIES, 1926

Cause of disease or injury	Total number of compensable cases	Deaths	Permanent partial disabilities	Temporary disabilities	Total weighted days of time lost	Amount of compensation paid	Amount of medical aid paid
Harmful substances:							
Lead poisons.....	38		1	37	5,609	\$10,257	\$1,744
Toxic gases, vapors, and fumes.....	46	6		40	38,238	23,827	2,927
Toxic fluids.....	74			74	1,495	3,301	1,802
Irritant dusts and fibers.....	44	2		42	13,127	14,005	949
Germs.....	32	1		31	6,988	8,033	1,756
Miscellaneous irritants—poisonous plants, etc.....	34			34	461	774	494
Harmful conditions:							
Air compression.....	6			6	138	363	277
Extremes of humidity.....	7			7	142	338	155
Extremes of temperature.....	25	1		24	6,625	7,948	700
Excessive light.....	3			3	33	38	119
Causing inflammation of joints and tendons.....	6			6	74	114	122
Occupational diseases, not otherwise classified.....	25	1	1	23	8,169	9,972	763
Total.....	340	11	2	327	81,099	78,970	11,727

¹ This figure includes medical aid contract cases at average medical cost shown by fee cases.

European Systems for Relief of Prolonged Unemployment

THE extensive unemployment which followed the war in most European countries necessitated the adoption of additional measures of relief even where some form of unemployment insurance was already in force. An account of some of the more important of these systems of extended insurance or extraordinary relief is given by Dr. Fritz Rager in the *International Labor Review*, December, 1927.

Unemployment insurance is said to be in effect at the present time in 19 countries and covers about 45,000,000 workers. In some countries the insurance principle has been followed, in others that of relief, and in a few cases the two systems have been combined. The latter has been the case where the economic depression has resulted in long periods of unemployment for large numbers of workers. In Austria, England, and Germany, for example, the systems were established on an actuarial basis, providing for the payment of benefits during a limited period, but the necessity for helping the unemployed beyond this fixed period has resulted in modification or abandonment of this principle.

There are certain advantages and disadvantages inherent in each system. The insurance system, while guaranteeing relief to the unemployed worker for a certain fixed period, has the disadvantage of not being flexible enough to cover special cases and does not pay benefits beyond a limited time, while the principal advantage of the relief plan is that there is no rigid time limit for drawing benefits. The cost of administration of a relief plan is, however, greater than that of an insurance plan and the benefits are smaller. The objection to the relief plan from the standpoint of the public has been that it reduces the willingness to work, but in answer to this it has been argued that the benefits are in almost all cases so small that they do not furnish an incentive for drawing benefits instead of earning wages.

Germany

GERMAN unemployment insurance was recently reorganized by the act of July 16, 1927. The normal period for which benefits are paid—26 weeks—is the same as in the earlier law but in case the state of the labor market is particularly unfavorable the administrative council of the Federal Unemployment Insurance Institute may extend this maximum to not more than 39 weeks, while the Federal Minister of Labor has the power after consultation with the administrative council to extend the emergency benefit beyond this period. In accordance with this provision a circular was issued by the Minister of Labor on August 9, 1927, which does not lay down any limits to the benefit period, with the result that unemployed workers may draw benefits for an unlimited time. It is provided that, in order to prevent persons who have suffered from prolonged unemployment from continually drawing benefits, a special effort must be made by employment exchanges to place such persons and they must be referred to emergency relief works or compulsory works before other unemployed persons. The funds for ordinary benefit are maintained by contributions of employers and employees, on the insurance principle,

while the costs of the emergency benefits are paid by the Federal Government and the communal authorities, one-fifth of the cost being paid by the latter.

Austria

THE original unemployment insurance act in Austria was passed March 24, 1920, but owing to continued economic depression the provisions for extraordinary unemployment benefit have been repeatedly amended. At present the period for which benefits are paid is practically unlimited, but the amount of the emergency relief is fixed not by the act but by the district industrial commissions. The amount of money available for such relief is definitely limited, as the employers and workers pay fixed contributions. In order that the funds shall be able to meet the situation it is necessary to restrict the number of persons who may receive emergency relief or to reduce the benefit below the ordinary unemployment benefit rates. In certain districts women and young persons receive less than the full rate.

By the workers' insurance act of April 1, 1927, a change was made in the form but not in the principle of continued payment of benefits. This provides for a provisional settlement of the question for unemployed workers over 60 years of age by the creation of old-age pensions until the country shall have attained a certain standard of prosperity, when the old-age and invalidity insurance act will come into effect. Under the present provisions, therefore, unemployed workers who have completed their sixtieth year receive a permanent allowance equal to two-thirds of the unemployment benefit, which is known as old-age relief pension. In spite of the reduction of the benefit, this transference from the system of unemployment relief to old-age relief must be regarded, the writer says, as "an act that furthers the aims of social policy by relieving the labor market and the unemployment insurance system."

Great Britain

THE special unemployment benefit was introduced in Great Britain in 1921 and was converted into a statutory right in 1924. In 1925 the right to the benefit was abolished and its granting again depended upon the decision of the unemployment authorities. As first introduced the benefit was paid for only a specified time and within this period for only a stated number of weeks, so that there were so-called "gaps" between the times in which benefits were paid. But in 1924 this restriction was removed and emergency relief has now practically no time limit. The provision for emergency relief comes under the unemployment insurance act, which provides for three forms of benefit—standard benefit, dependents' benefit, and extended benefit. The standard benefit is paid if 20 contributions have been paid during the previous year and the maximum duration of this benefit to which the worker has a legal claim is 26 weeks. A bill¹ introduced in Parliament November 8, 1927, would make the receipt of unlimited unemployment benefit dependent upon payment into the fund of at least 30 contributions (15 in the case of ex-service men) within two years preceding the date of the claim.

¹ See Labor Review, December, 1927, pp. 89, 90.

Russia

THE payment of unemployment benefit in Russia is based on the labor code adopted November 9, 1922. The maximum benefit period is now fixed at nine months for each year of unemployment. Benefit is withdrawn for a period of three months, during which increased pressure is brought to bear upon the individual to find work, and by an act passed in 1927 benefit is withdrawn after it has been granted for two years. In addition to the regular benefit, trade-union members are entitled to a special benefit varying in amount according to their length of membership. There is no time limit on this benefit.

From time to time emergency relief works are organized by the unemployment relief institutions and a bimonthly system of rotation on these works is used so as to benefit as large a number of the unemployed as possible. Proof of a certain length of employment in the two years preceding the unemployment is required of trade-union members, and during the three years preceding for workers who do not belong to a union.

All the contributions for the maintenance of the insurance funds come from the employer, but as so large a number of the undertakings are nationalized this amounts to a State contribution in the case of these industries.

Poland

UNDER the unemployment insurance acts of 1924 and 1925 in Poland, insured persons were entitled to benefits for 13 weeks, which might be extended to 17 or 26 weeks in case of special emergency. The persistence of the economic depression, however, resulted in the establishment of additional emergency relief, the costs of which are met by the State. The costs of the regular unemployment insurance funds are paid by means of a State subsidy and workers' and employers' contributions.

Denmark

THE voluntary insurance funds attached to the trade-unions and recognized by the State pay benefits for unemployment in Denmark. These funds are maintained by the employers' and workers' contributions and subsidies from the State and communes. Although additional emergency benefits were allowed through the period of depression, an act regulating unemployment benefits, which came into force October 1, 1927, abolishes the special and emergency benefits. These may be paid when an unemployment fund is in a position to establish its own emergency fund but by this act the State unemployment fund, from which subsidies were granted for this purpose, was greatly reduced, and the employers' contributions were also reduced and will subsequently be abolished altogether, so that it is apparent that Denmark is preparing to depart very considerably from the principle of paying benefits for an unlimited period.

Conclusion

THE writer says in conclusion—

The above account will have shown that States of the most varied political tendencies have had to adopt a change in their system of unemployment benefit, from the insurance principle, with its time limit, to the relief principle, with in practice no time limit. Considering how long these institutions have already been at work, it may well be said that the question at issue is not merely one of the protection of the workers, but that it is a weighty political and economic problem which economists of all countries will almost certainly have to take into account in the near future as a factor in economic and financial estimates, extended benefit being in fact financed almost without exception out of State resources. Only a fundamental improvement in economic conditions, or the achievement of an ideal equilibrium between supply and demand on the world labor market, could liberate the industrial States in question from this problem.

Reciprocal Workmen's Compensation Agreement Between Argentina and Denmark ¹

ON NOVEMBER 16, 1927, the Argentine Minister of Foreign Affairs and a diplomatic representative of Denmark signed a convention providing for the reciprocal treatment of their nationals as regards workmen's compensation for industrial accidents. This agreement provides that citizens of one of the contracting countries suffering from an industrial accident in the other country shall have the same right to compensation which the local law concedes to its nationals. This principle applies even though the injured worker or his heirs subsequently leave the country of residence or if the heirs reside in a country other than that in which the accident took place. Government officials of both of the contracting countries are to co-operate in enforcing the workmen's compensation legislation, particularly as regards the notification of next of kin.

Franco-Belgian Agreement Regarding Miners' Pensions ²

A CONVENTION granting reciprocal rights to Belgian miners employed in French mines and to French miners employed in Belgian mines in respect to the retirement allowances granted in the two countries was concluded between these countries February 14, 1921.³ This convention has been superseded by a new agreement concluded between France and Belgium May 21, 1927, which will become effective as soon as ratifications have been exchanged and will have a duration of one year, being tacitly renewed each year unless it is denounced by either signatory three months before its expiration.

The principal provisions of the convention are as follows:

French workers employed only in Belgian mines and Belgian workers employed only in French mines will be entitled to all the advantages provided in the miners' retirement laws in each country if they have fulfilled the other requirements of these laws. Widows

¹ International Labor Office. Industrial and Labor Information, Geneva, Jan. 9, 1928, p. 27.

² France. Ministère du Travail et de l'Hygiène. Bulletin, July-August-September, 1927, pp. 358-363.

³ See Labor Review, November, 1922, p. 192.

and orphans will likewise benefit by the laws of the country in which their husband or father was employed.

Provision is made for the retirement of the workers at the age of 55 in France and at the age of either 55 or 60 in Belgium, according to the date of birth, if they have been employed less than 30 years but more than 15 years in the country in which they were last employed, the pension being based on the length of service in the latter country. They are also retired for permanent invalidity, which must be total in Belgium and equal to two-thirds incapacity in France.

Workers whose cumulative service in the two countries amounts to at least 30 years or a minimum of 7,920 days of work are entitled to an allowance equal to at least the minimum pension fixed by the least favorable legislation of the two States, and to the bonuses for cost of living and for coal. If these workers have been employed in both underground and surface work they must have reached at least the age of 55. Workers who have been employed for 30 years in one country alone will have the right to be retired according to the laws of that country only, but will also be entitled to any payments due them on account of contributions to their individual accounts in the insurance organizations of the other country.

These provisions, with the exception of that relating to wives and dependents are also applicable, subject to certain exceptions, to workers in slate quarries and to workers employed in industrial establishments connected with the coal mines.

Enactment of Workmen's Compensation Law in Paraguay ¹

ON SEPTEMBER 7, 1927, President Ayala of Paraguay signed the workmen's compensation law (No. 926) which passed the Senate and Chamber of Deputies on August 31, 1927. The outstanding provisions of this legislation are given below.

Employments Covered

INDIVIDUALS or firms engaged in manufacturing, shopwork, or other industrial and commercial occupations, the construction, repair, and maintenance of buildings, railways, port works, dams, canals, etc., agricultural pursuits in which mechanical power is used, stock raising, refrigeration and kindred industries, mining and quarrying, transportation, loading and unloading, the manufacture or use of explosives, inflammable materials or electricity, the installation of telephone and telegraph systems, and the preparation of yerba mate, will be liable for industrial accidents occurring to their employees or laborers when the accident arises out of and in the course of the employment or is the result of an unforeseen event or cause inherent in the character of the work. For the purposes of this law the State and municipalities shall be considered as employers.

The law exempts the employer from all responsibility in the following instances: (1) When he employs fewer than seven employees or workers; (2) when the accident was provoked intentionally by

¹ Paraguay. *Diario Oficial*, Asunción, Sept. 8, 1927, pp. 1-3.

the victim or one of his dependents; (3) when the injured worker is under the influence of liquor; (4) when the accident is due to force majeure.

The responsibility of the employer continues even when the employees work under the direction of an agent or contractor.

Where an industrial accident takes place without a legally excusable cause the employer shall provide free medical and pharmaceutical aid until the employee can return to work or is declared to be permanently disabled.

Benefits

THE compensation scale is based upon the earnings of the injured employee. The daily wage is used as a basis in fixing compensation for temporary disability. In case of a worker who has not been employed for the whole year, the compensation is computed on his average daily earnings multiplied by 300.

Only a disability lasting more than 10 days shall be compensated. The total amount of compensation may not exceed 50,000 pesos nor may the daily salary be computed at less than 15 pesos, even in the case of unpaid apprentices.

Employers' property is subject to attachment for failure to pay these benefits promptly.

Death.—If the industrial accident causes death, the employer shall pay, in addition to funeral expenses, which are not to exceed 2,000 pesos, an amount equal to the worker's average earnings for 1,000 days. Only the surviving spouse and minor children who have been supported by the deceased receive this compensation, except where there are ascendants who have lived with and been supported by him, in which case they also shall share in the benefits.

Permanent total disability.—An employee who is permanently and totally disabled as the result of an industrial accident shall receive compensation equivalent to his average earnings for a period of 1,000 days.

Permanent partial disability.—In cases of permanent partial disability resulting from an industrial accident the employer shall pay an amount equal to 1,000 times the reduction in daily wages suffered as a result of the disability.

Temporary disability.—For temporary disability employers are required to pay employees two-thirds of their regular wages during their disability, provided that it does not last longer than a year. If it exceeds this time, permanent disability benefits shall be awarded the employee.

The executive shall determine the injuries which shall constitute total, permanent, or temporary disability and the corresponding compensation based on the reduction in working ability brought on by the injury, taking into account the occupation, age, and education of the injured worker.

Occupational Diseases

IN CASE the employee is incapacitated or dies as a result of a disease contracted while carrying on his work, or where it is proved to have originated from work carried on by him during the year previous to his disability, he shall be compensated. Benefits

are not payable, however, if it is proved that the workman was suffering from the disease before entering the employment. The compensation must be claimed from the last employer for whom the man worked during the year referred to, on the kind of work which caused the disease, unless it is proved that the same was contracted while in the service of other employers, in which case the latter shall be liable. If the disease, owing to its nature, could have been contracted gradually, the other employers in whose service the worker had been employed during the last year, on the kind of work which caused the disease, are liable to the last employer for a proportionate share of the compensation, to be fixed by arbitrators if there is any disagreement concerning it.

The worker shall be entitled to receive as the first payment 15 per cent of the total amount of the compensation due him. When the total compensation amounts to less than 10,000 pesos it shall be paid in a lump sum.

The executive shall enumerate the occupational diseases which are compensable.

Accident Reporting

THE employer is required to report an industrial accident to the nearest judicial authority within 30 days, if it causes the worker's death or his permanent total or temporary disability. A fine of from 100 to 1,000 pesos is imposed on those failing to comply with this provision.

Special Provisions

COMPENSATION benefits are not subject to attachment and may not be transferred or renounced.

When a disabled worker leaves the country he loses his right to the compensation benefit. Heirs of foreign workers will not receive compensation if they do not reside in the country at the time the accident takes place.

Irrespective of the liability of the employer, injured employees or their representatives have a right of action against any third party causing the accident; this may be brought by the employer at his own expense and in the name of the worker or his heirs if they have not brought the action within eight days after the accident.

Compensation claims must be made within one year after the date of the accident except in the case of minors.

Any agreement contrary to the provisions of this law will be considered null and void.

The executive shall issue the necessary regulations for the enforcement of this law and see to it that the undertakings included therein adopt adequate measures to prevent industrial accidents and abide by certain requirements as to sanitation and health.

LABOR LAWS

Labor Legislation of 1927

THE legislatures of 46 States and 3 Territories met in 1927. The Virginia and Louisiana legislatures met in special session, and besides the regular sessions, West Virginia and South Dakota had extra sessions. It is understood that New Hampshire, Louisiana, and Texas had extra sessions but the laws have not been received. As the Louisiana Legislature met because of the flood emergency and acted practically entirely on this subject the session is not of particular importance from a labor viewpoint. The Kentucky and Mississippi legislatures did not meet, but with the exception of these two States and Louisiana, all the States passed legislation of interest to labor.

In this article an outline of labor legislation is offered under topical headings, and is useful principally for reference purposes or as a check, rather than for the information it contains. The article is not exhaustive and does not contain references to laws on the subject of occupational licenses, convict labor, group insurance, and the administration of labor laws. (For workmen's compensation legislation in 1927, see *Labor Review* for January, 1928, p. 17.) The annual compilation containing references, summaries, and reprints of all labor laws for the year 1927 is in preparation.

The outstanding piece of labor legislation for the year was the New York eight-hour law for females. Commendable activity was noticeable in the legislation of California with regard to the protection of individual employment contracts and the payment of wages. The definition of "prevailing rate" and "locality" by New York State in an attempt to make the State "current rate of wages" law constitutional will be of particular interest to those States having the same type of law regulating wages on public works. The subjects of safety and pensions appear to be receiving considerable attention.

Employment Contract

CALIFORNIA (chs. 263, 264, 333, 334), Indiana (ch. 25) and West Virginia (ch. 16) have materially strengthened the laws regulating private employment agencies.

Michigan (No. 20) now charges \$1 a year for the services of the State employment bureaus. Wisconsin (ch. 308) provides for the construction of buildings for State employment offices. Washington (ch. 71) repealed the law prohibiting the collection of fees for securing employment. (See *Adams v. Tanner*, 244 U. S. 590.)

In public departments and on public works in Connecticut (ch. 264) and Montana (ch. 133) war veterans are given preference. In Iowa (ch. 27) goods produced or manufactured locally are preferred in purchases by the State. Montana (H. J. R. 4) passed a resolution requesting all railways operating in the State to have repair work done by workmen employed in the State.

California (ch. 347) further limits the rights of the employer in demanding a cash bond from employees; chapter 268 of that State amends the law aimed at misrepresentation of conditions of employment, and chapter 619 makes persons who fraudulently obtain the labor or services of another guilty of theft. Connecticut (ch. 269) provided a penalty for persons who divert from the State the benefit of the labor of any of its employees. Nevada (ch. 45) made all able-bodied males between 16 and 50 subject to fire duty. In Connecticut (ch. 108) the highway commissioner is authorized to supply employees with badges.

Pennsylvania (Nos. 454 and 310) repealed several old laws which provided for the indenture or binding out of certain minors. Michigan by Act No. 211 repealed certain "obsolete and inoperative laws." (See 1927 Laws, pp. 424, 431, 432.)

The laws prohibiting certain employments to children under a certain age were strengthened in Maine (ch. 171), North Carolina (ch. 251), and Nevada (ch. 151), but were weakened in Minnesota (ch. 388). Washington (ch. 154) repealed its law authorizing the binding of indigent minors as apprentices. The consent of a parent or guardian of a child between 14 and 16 years of age is now necessary before a work certificate can be granted in West Virginia (ch. 38) and between these ages Connecticut (ch. 72) now allows the granting of certificates of employment for Saturday and out-of-school hours. The subject of school attendance received attention in California (ch. 227), Hawaii (Act 139), Maine (chs. 87, 137), Michigan (No. 319), Nebraska (ch. 84), North Dakota (ch. 238), and Pennsylvania (No. 286). Montana (H. J. R. 2) ratified the child labor amendment to the Constitution.

Wages

Private Employment

MECHANICS' liens and general liens for work done by jewelers, farmers, loggers, miners, watchmen, and others, received attention by extending the benefits of the lien, creating new liens, or changing the procedure in their enforcement. Laws on this subject were passed in the following jurisdictions: Alaska (chs. 6, 7), Arkansas (Act No. 24), California (chs. 368, 505), Connecticut (ch. 198), Delaware (ch. 184), Georgia (p. 218), Idaho (ch. 182), Illinois (pp. 597, 598), Indiana (ch. 189), Massachusetts (ch. 210), Michigan (Act No. 380), Minnesota (ch. 343), Montana (ch. 130), New Hampshire (ch. 88), New Jersey (ch. 241), New York (ch. 590), Oklahoma (chs. 42, 106), South Dakota (chs. 115, 142, 160), Tennessee (ch. 35), Virginia (ch. 64), Washington (chs. 220, 241, 256), Wisconsin (ch. 320), and Wyoming (ch. 77).

The exemption of wages and tools from garnishment and attachment was the subject of legislation in California (ch. 199), Hawaii (Acts Nos. 96 and 243), Wisconsin (ch. 380), and Washington (ch. 287).

The close connection between the subject of small loans and wages will justify the listing here of statutes on the subject of small loans: Alabama (Acts Nos. 268, 597), California (ch. 36), Connecticut (ch. 233), Missouri (pp. 164, 252), Nebraska (ch. 50), North Carolina (ch. 72), Rhode Island (ch. 1060), and Wisconsin (chs. 284, 540).

Pennsylvania (No. 312) repealed its law requiring the payment of wages at regular intervals and in lawful money of the United States. In Wyoming (ch. 41) the State inspector of coal mines was made the legal examiner of scales by which coal is weighed for the purpose of determining wages. In Indiana (ch. 90) the State commissioner of weights and measures is required to test the scales used at the mines. In West Virginia (ch. 37) employers may now pay wages in advance of the date due, in scrip in certain cases.

California (ch. 217) has provided further penalties for violation of the laws regarding the payment of wages. Wisconsin (ch. 534) strengthened its law with regard to holding stockholders liable for the payment of wages. South Dakota (ch. 115) no longer allows exemption from legal process for the cost of labor performed in the erection of homesteads. Idaho (ch. 16) made exceptions to her law requiring employers to deduct road poll taxes from wages due employees.

North Dakota (ch. 83) repealed section 17 of the minimum wage law, providing for an annual appropriation.

Public Works

The New York law (ch. 563) defined "prevailing rate" and "locality" in an attempt to make their "current rate of wages" law constitutional, in view of the United States Supreme Court decision in *Connally v. General Construction Co.* (269 U. S. 385). Alabama (Acts Nos. 39, 347) now requires a bond guaranteeing the payment of wages on certain public works. (See also North Carolina (ch. 151).) California (chs. 146, 532, 741) strengthened its law with regard to the protection of wages on public works and Connecticut (ch. 121) made an exemption from the requirement of supplying bonds for the payment of wages, in the case of buildings or bridges constructed under the supervision of the State highway department. On the subject of mechanics' liens in the case of public works, Illinois (p. 597), Michigan (Act No. 167), New Hampshire (ch. 88), and Washington (ch. 220) have changed their laws.

Public Employees

In Colorado (ch. 112) the wages of certain public employees were made subject to garnishment. In South Dakota (ch. 135) the procedure in the garnishment of wages of public employees has been changed, and in Wisconsin (ch. 112) a judgment based on the garnishment of wages of public employees has priority over assignments of wages filed subsequent to commencement of suit but prior to judgment.

Hours of Labor

Private Employment

WOMEN and children.—The New York eight-hour law was the outstanding piece of hours of labor legislation for the year. This law provides for a 6-day or 48-hour week instead of a 6-day or 54-hour week for females over 16 years of age in factories and (except between December 18 and 24, inclusive) mercantile establishments. Two exceptions are allowed: (1) In order to make one shorter work-day or

holiday a week a woman may work 9 hours a day for 5 days and not more than $4\frac{1}{2}$ hours on such shorter day ($49\frac{1}{2}$ hours); and (2) during any calendar year she may be employed an additional 78 hours, but in no case more than 10 hours a day, 6 days or 54 hours a week (ch. 453). In North Carolina an 8-hour day and 6-day or 48-hour week for children between 14 and 16 years of age has been created in the occupations forbidden to children under 14 years of age (ch. 251). The Arizona eight-hour law for women was amended (ch. 44), extending its application to manufacturing, places of amusement, and other establishments except domestic work, by requiring a 6-day week (unless employed 6 hours a day or less) and a 48-hour week instead of 56 hours. The handling of perishable fruit during the season is exempted from the law. The requirement of one hour for meals was repealed. In Michigan the exemption given to "persons" from the hours of labor law for women and children engaged in handling perishable goods is extended to "corporations" (No. 21) and in Minnesota an exception was made for a period of 75 days to the hour limitations for female employees in preserving perishable fruits, grains, or vegetables (ch. 349). Penalties for failure to comply with orders of the industrial welfare commission fixing hours and conditions of labor for women and children are provided for by a California amendment (ch. 248). The prohibition of night work between 10 p. m. and 6 a. m. for women has been extended in Connecticut to children under 16 years of age (ch. 144). In North Dakota the exemption from the law on the hours of labor for women was extended to employees in small telegraph exchanges and telegraph offices and the law requiring permission to work more than the legal hours in emergencies was repealed (ch. 142).

Men.—The hours of work in cement and plaster manufacturing plants were limited to eight in Colorado (ch. 87). Maryland (ch. 561) has repealed its 12-hour law applicable to employees of horse-car railway companies. Eight hours as applied to underground workers was defined in Nevada as including the time from reaching the place of work in the underground mine to returning to the surface from the said place of work (ch. 105).

Public Works

The California law, limiting hours of labor on public works to eight, with an exception for emergencies, was amended to require a report as to the nature of the emergency within 30 days (ch. 257).

Holidays and Days of Rest

Armistice Day, November 11, was made a holiday in Connecticut (ch. 23), Maryland (ch. 239), Ohio (p. 64), Washington (ch. 51), and West Virginia (ch. 59). Oregon declared Lincoln's Birthday, February 12, and October 12 holidays (ch. 252). Ohio made Labor Day and May 30 holidays (p. 64) and West Virginia made June 20 (West Virginia Day) a holiday (ch. 59).

New Jersey prohibited barbering on Sundays (ch. 116). Arizona provided for a weekly day of rest for adult women who work more than six hours a day (ch. 44). Wisconsin now allows its industrial commission to make reasonable exceptions to the day of rest law (ch. 253).

Annual vacations to public employees received attention in three States—Kansas (ch. 296), Massachusetts (ch. 131), and South Dakota (ch. 73).

Safety and Health

Prohibited Employments

THE employment of persons suffering from certain communicable diseases is prohibited in public eating places in Pennsylvania (ch. 283) and in laundries in Maryland (ch. 510); in Idaho (ch. 116) the same type of law was extended to cover more occupations. The Maryland law (ch. 566) forbidding the employment of females as waitresses in theaters or places of amusement was repealed.

Employment in Mines

Laws tending to improve the safety and health of miners were passed in several States. Alaska (ch. 63) provided for further cooperation with the United States. Arkansas (ch. 58) strengthened its requirements concerning mine maps. California (ch. 789) provided for the disposition of funds received by the State mining bureau. Colorado (ch. 129) no longer requires employment of mine foremen where five or less persons are employed underground and (ch. 130) any person, apparently whether intentional or not, destroying mine machinery or disobeying safety orders is guilty of a misdemeanor. Illinois (p. 45) provided for two new mine rescue stations and (p. 600) amended the law as to blasting powder and (p. 602) as to the men allowed in coal mines during shooting or blasting. Indiana (ch. 99) now requires rock dusting. (See also other changes made by chapter 90.) Iowa (ch. 31) now requires that shot firemen shall be supplied with gas masks and the requirements for mine officials have been changed (ch. 30). Michigan (Act No. 31) extended its penal law on malicious injuries to mines. Montana (ch. 27) now allows the firing of shots in coal mines at any time where new methods of mining are developed, and (ch. 28) provides for ventilation. New Mexico (ch. 115) established a bureau of mines. The Ohio law provided for rock dusting and made several other changes (p. 144). Oklahoma (ch. 86) redivided the State into new mining inspection districts. Pennsylvania (Act No. 251) provides for further regulations when the "room and pillar" system is not used and for better air. (See also repealing statutes, chapters 186, 359, 360, 363.) Washington (ch. 306) made many changes in its law. West Virginia (ch. 23) acted on the subject of mine rescue work and (ch. 24) allows electric haulage in certain mines in some cases. Wyoming acted on the subject of the use of explosives in mines (ch. 52), qualifications of coal mine officials (ch. 53), rock dusting (ch. 97), maps of coal mines (ch. 51), and general safety in coal mines (ch. 95).

Inspection

Factory.—In Connecticut (ch. 16) the number of factory inspectors was increased and the inspection of elevators received attention (ch. 25). In Massachusetts (ch. 275) the commissioner of labor is now authorized to appoint as many building inspectors as he may deem necessary, instead of four. Missouri (p. 276) passed a general law

for the safety of persons engaged in building work. New York (ch. 495) provides for cleanliness of walls in factories.

Boiler.—Arkansas (ch. 228) increased the number of boiler inspectors. Other States legislating on the subject of boiler inspectors were Colorado (ch. 69), Massachusetts (ch. 296), Minnesota (ch. 378), and New York (ch. 32).

Sanitation

California (ch. 205) requires that toilet facilities be supplied for operating rooms of motion-picture houses, and (ch. 743) provides for sanitation in labor camps. Maryland (ch. 510) provides for sanitary conditions in laundries.

Miscellaneous

Michigan provided for safety appliances (No. 102) and safety kits on railroads (No. 176). Wisconsin passed safety laws with regard to railroad switches (ch. 203) and railroad platforms (ch. 303). Connecticut (ch. 6) directed the department of health to include in the sanitary code regulations concerning tetraethyl lead.

Labor Unions and Disputes

PENNSYLVANIA (Act No. 406) has provided that labor unions are authorized to register the emblems of their organizations and a penalty is provided for persons who use such emblems unless entitled to do so by the regulations of the union. The California law (ch. 314) regulating advertising for employees in time of strikes or labor disturbances no longer excepts advertisements published solely or within the locality where the labor disturbance exists and it is further provided that the advertiser's name must appear in the advertisement and this name shall be *prima facie* evidence of responsibility for the advertisement. Porto Rico (Act No. 32) increased the per diem allowance to the members of the mediation and conciliation commission from \$5 to \$10, but the number of such per diem allowances was limited to eight per month.

The subject of industrial police received attention in Indiana (ch. 18), Ohio (p. 236), and Oregon (ch. 13).

Pensions

OLD-AGE PENSIONS.—Maryland (ch. 538) and Colorado (ch. 143) have passed general old-age pension laws and authorize counties and certain cities to establish the system.

Mothers' pensions.—This was the subject of legislation in Illinois (pp. 196, 197), Iowa (chs. 72, 73), Minnesota (chs. 362, 287), Missouri (p. 127), Montana (ch. 12), Nebraska (ch. 149), New Hampshire (ch. 87), New York (ch. 684), North Dakota (ch. 176), Oregon (ch. 233), Washington (ch. 20), and Wisconsin (ch. 273).

Public employees.—The retirement and pensioning of public employees, particularly of teachers, policemen, and firemen, was the subject of legislation in several States—Alabama (Nos. 223, 364, 365, 493, 534), Arizona (ch. 47), California (chs. 86, 419, 470, 508, 431), Connecticut (chs. 65, 76, 103, 223, 259), Delaware (chs. 88, 89), Georgia (pp. 262, 265, 268), Hawaii (Acts 31, 223, 249, 251), Illinois (pp. 239, 241, 261, 265, 268, 271, 273, 275, 278, 290, 293, 373, 374,

375, 595, 633, 649, 673, 676, 792, 841), Indiana (chs. 84, 141), Iowa (chs. 165, 166), Kansas (chs. 124, 125), Maine (chs. 41, 253), Maryland (chs. 27, 344), Massachusetts (chs. 101, 173, 257, 321, 325), Michigan (Nos. 130, 135, 319, 339), Minnesota (ch. 190), Missouri (p. 525), Montana (chs. 58, 100, 150), Nevada (ch. 165), New Hampshire (ch. 17), New Jersey (chs. 18, 67, 117, 118, 120, 145, 178, 185, 186, 190, 256, 267, 279, 303, 305, 306), New Mexico (chs. 67, 94), New York (chs. 171, 174, 426 (art. 8), 578, 698, 704, 706, 617), Ohio (pp. 99, 250, 419), Oklahoma (ch. 74), Pennsylvania (Nos. 31, 55, 64, 157, 164, 214, 249, 336), Rhode Island (ch. 1073), South Dakota (ch. 172), Utah (chs. 8, 67), Vermont (Act 28), West Virginia (ch. 44), Wisconsin (chs. 291, 365), United States (44 Stat. 1380).

Vocational Rehabilitation

LEGISLATION on the subject of vocational rehabilitation was enacted in the following States: Arkansas (Act No. 145), California (chs. 585, 590), Florida (ch. 11834), Montana (ch. 1), New York (ch. 492), North Dakota (ch. 285), Oklahoma (ch. 2), Rhode Island (ch. 1039), South Carolina (Act No. 130), Wisconsin (chs. 363, 425, 488.)

Investigating Commissions

THE legislatures have provided for investigations in several States. The general subject of old age is receiving attention in Arkansas (p. 1200) and California (ch. 452). California (ch. 431) is also investigating retirement for State employees. In Colorado (H. C. Res. No. 6) teachers' retirement is receiving attention. In the field of safety regulations several investigations are under way—mining in Illinois (p. 69), Oklahoma (ch. 215), Pennsylvania (No. 393), Tennessee (H. J. Res. No. 1). In Connecticut (ch. 326) industrial diseases are receiving attention.

Regulation of Working Conditions in Refrigerating Establishments in Uruguay

A URUGUAYAN decree regulating working conditions in refrigerating establishments appears in the January 27, 1927, issue of the *Diario Oficial* of that country (p. 196A). The decree provides that workers engaged in such plants shall not be over 45 nor under 20 years of age. Each worker is required to undergo a medical examination twice a year. When the examination shows that his health is not normal, his employment on the work in question shall be prohibited until he has completely recovered. The workday shall not exceed eight hours, and a rest period of at least 15 minutes must be allowed after every hour and three quarters' work. Workers are to wear working clothes which afford adequate protection. The air in refrigeration plants must be free from humidity, and drafts must be avoided. Facilities must be provided for the workers to take hot baths when their work is over.

HOUSING

Workers' Housing Development in Chile

A REPORT on the progress which Chile is making in providing her workers with homes appears in the December, 1927, issue of the Pan American Union Bulletin.

The Chilean Government is to devote 60,000,000 pesos toward the erection of hygienic, moderately priced houses or apartments for the exclusive use of workers in the form of loans to the following: Cooperative housing societies incorporated and approved by the Ministry of Public Health, Social Welfare, and Labor; individuals desiring to erect dwellings for their own occupancy; municipalities which will construct houses under Government supervision; the army and navy retirement funds; and owners desiring to repair workers' dwellings.

According to the instructions issued by the Minister of Public Health, Social Welfare, and Labor, the Chilean Government intends to construct workers' houses on its own account and offer them at a rental which will cover interest and amortization of the amount invested plus the necessary expenditure for repairs. In addition to erecting these dwellings with low rentals the Government will each year award by lot a certain number of homes to careful tenants who are known to have a good character and a large number of children.

The report contains a summary of what has been accomplished under this law up to the present time. A group of 80 houses was constructed by the printers' cooperative society; the postal and telegraph employees erected 28; while the employees of the Internal Revenue Bureau are now building a large number of houses in Providencia. The workers of the Dávila Baeza Society erected 79, and the street-car employees are putting up 149 dwellings. The Superior Council of Social Welfare has already taken favorable action on 199 construction projects covering 5,315 buildings, having 17,631 rooms, of which 445, containing 1,896 rooms, have been completed, leaving 4,870 under approved projects. These 5,315 dwellings will house at least 30,000 persons.

The value of the houses erected or to be erected by the groups of clerks, manual workers, and army officers is given at 73,639,730 pesos, and those built by individuals for rental purposes are valued at 29,718,518 pesos, while those constructed by individuals for their own use are worth 1,064,595 pesos.

Señor Alejo Lira Infante, a member of the Superior Council of Social Welfare, in speaking of Chile's housing development, said in part as follows:

It is hoped that as many as 4,000 houses may be erected with the 40,000,000¹ pesos available in 1927, thus redeeming from the painful slavery of the tenement 20,000 of our fellow citizens. * * * And who can doubt that these members of society who are well employed, who are protected by laws providing for indus-

¹ This sum was later increased to 60,000,000 pesos.

trial accident compensation and old-age insurance, who are enabled to enjoy the atmosphere of a real home—that cradle of true affection and character education—will form a powerful factor in assuring social peace, the supreme aspiration of every civilized nation?

Housing Shortage in Germany

STATISTICS recently obtained in Germany show the seriousness of the housing problem and the results obtained by steps taken so far.¹

On May 16, 1927, by legal decree a housing census was carried out throughout Germany, the Saar district being excluded. Prior to this undertaking it was estimated that in order to provide each family with a separate lodging 1,200,000 additional buildings would be required for 1925.

The census of 1927 discloses the number of houses required in towns of more than 5,000 inhabitants (33,500,000 inhabitants, or 53.7 per cent of the total population) to be 776,000. This includes not only households required to share lodgings with another family though retaining a separate domestic organization, but also those who actually share the domestic arrangements of another family but would normally form a distinct household.

The seriousness of the shortage varies according to the size of the community. It was found that in small towns (5,000 to 20,000 population) families having no independent household formed 6.3 per cent of the total families, and in large towns (over 100,000), 10.3 per cent; in all towns combined such families formed 8.9 per cent of the total.

It is estimated that even in a normal period of housing about 2 per cent of all families share their dwellings with other families for reasons other than those connected with a shortage of housing.

If the immediate housing requirements in Germany are placed at 1,000,000 dwellings, this figure would not exaggerate nor would it include the replacement of old lodgings still inhabited on account of the shortage.

Considerable progress has been made in providing new accommodations. The building activity which began in 1921 and 1922, but was arrested to some extent in the following years on account of the difficulties attendant upon the inflation of currency, has been resumed with renewed intensity, as shown by the following table:²

HOUSING ACTIVITY IN GERMANY, 1924 TO 1926

Year	Number of new dwellings available		Net increase, allowing for demolitions, etc.
	New buildings	Old buildings transformed	
1924.....	94,807	20,569	106,500
1925.....	164,437	23,375	178,930
1926.....	190,084	21,445	205,790

¹ Germany. [Reichswirtschaftsministerium.] Statistisches Reichsamt. Wirtschaft und Statistik, Berlin, August, 1927, pp. 686-693.

² International Labor Office. Industrial and Labor Information, Geneva, Oct. 31, 1927, pp. 158, 159.

National Aid for Constructing Tenement Houses in Italy

ACCORDING to a report from the American vice consul in charge at Rome, Italy, the Italian Government by a decree of October 23, 1927, has authorized the Minister of Finance to advance the amount of 48,000,000 lire to the Institute for Tenement Houses in Rome. This institute is an official organization engaged in the construction of dwelling houses and apartments to which the tenants may secure permanent title on a monthly part-payment plan. Reimbursement must be made to the treasurer by ways and means which will be determined by appropriate agreement between the minister and the legal representative of the institute.

Construction of Workmen's Houses by Cities of Venice and Bolzano, Italy¹

IT HAS recently been announced by the Minister of Public Works of the National Government at Rome that a subsidy of 5,000,000 lire had been allotted to the city of Venice for assistance in building a large number of popular-priced houses for workingmen and middle classes in this city, and 25,000,000 lire additional will be raised locally by the city of Venice and individuals to assist the local institute for popular housing in beginning additional houses in the spring months to relieve the acute Venetian housing shortage.

The local quarter, Vittorio Emanuele, has already been developed through the housing institute and the work in this section is nearly completed. To date the housing accommodations in this quarter will care for 4,500 people. Several hundred large and small houses have been built, and the quarter has been developed commercially by tradesmen and is a small city in itself.

It has not been definitely decided as to where the new construction will be located, as Venice proper is completely built up. The only room for expansion is now either on the Lido or at the new Porto Marghera on the adjacent mainland. It is surmised, however, that a majority of the new houses will be erected on the north end of the Lido, which has sufficient room for further development.

The National Government has also subsidized construction work on the same type of houses in the city of Bolzano, the provincial capital of Bolzano, Alto Adige. Work in that place is also to begin as soon as the weather permits.

The housing institute is a cooperative society. It does not engage in competitive trade nor profit by the business done; neither does it act as contractor. Its scope is more development of urban housing, technical assistance, planning, and sanitation.

¹ Report from John E. Holler, vice consul in charge, Venice, Italy, dated Dec. 7, 1927.

Housing Situation in the Union of South Africa

THE housing situation in South Africa showed considerable improvement in May, 1926, as compared with May, 1918, and May, 1921, according to an official statement summarized in the Social and Industrial Review, published by the Labor Department of South Africa, in its issue for December, 1927. The average number of occupants per dwelling has fallen from 5.08 to 4.89, and the total number of private dwellings occupied by Europeans in all urban areas was approximately 171,000, as compared with 135,000 in 1921 and 125,000 in 1918. Attention is specially called to the increase in the number of dwellings owned by the occupier, which has risen from 35.7 per cent in 1918 to 39.5 per cent in 1921 and 45.9 per cent in 1926.

Much of the credit for this improvement is given to the operations of the central housing board, whose activities, it is announced, are to be continued during the next few years. For this purpose the Government has made provision for further loans under the housing act amounting to £1,000,000, to be spread over a period of four years from April 1, 1928.

It is estimated that with the repayments of existing loans which will become available for reissue there will be an annual amount of at least £300,000 to be devoted to housing purposes in the next few years. The Minister of Public Health, in making an announcement to that effect in the House of Assembly, pointed out that that represented about as much as could be utilized beneficially and without increasing costs. Doctor Malan stated that the new loans would be at 5 per cent per annum interest and would be used for assisting in the building of houses for the poorer classes and with a view to the amelioration of slum conditions. Local authorities will receive priority in those areas in which there was urgent need for such facilities, and the central housing board is engaged in drawing up proposals for the allocation of funds along these lines.

COOPERATION

Cooperative Purchase of Gasoline and Motor Oils

AN INTERESTING recent development in the cooperative field is that of the cooperative gasoline and oil stations. This development has occurred mainly in rural districts in the Middle West, especially in Minnesota, Nebraska, and Illinois.

Illinois

AN ARTICLE in the January 21, 1928, issue of *Agricultural Cooperation* states that in the past two years 19 farmers' cooperative oil stations have been set up in Illinois. In most cases each of these stations serves a whole county; they do not as a rule have service-pump stations but make deliveries direct to the farm by truck.

Two kinds of stock are issued—common stock of no par value, issued to farm bureau members only, ownership of which carries with it the right to vote in the organization and to participate in the distribution of patronage dividends, and preferred stock, ranging in the various organizations from \$25 to \$100, carrying the right to vote and to a dividend of from 6 to 8 per cent but no right of participation in patronage dividends.

Fourteen of these local associations have their own central purchasing organization, the Illinois Farm Supply Co., which began business April 1, 1927. It also issues common and preferred stock, like the local organizations, but adds a third class, preferred stock of \$1 par value, the whole issue of 2,500 shares being held by the Illinois Agricultural Association.

The central company is managed by a board of nine directors elected by delegates from the county organizations.

Its sales up to December 1, 1927, consisted of 261 carloads of gasoline, 138 carloads of kerosene, 37½ carloads of lubricating oils, 48,236 pounds of grease, and 2,471 gallons of denatured alcohol.

Nebraska

DATA regarding the cooperative oil stations in Nebraska were presented to the fifteenth convention of the Nebraska Farmers' Union, a summary of which is given in the January 25, 1928, issue of the *Nebraska Union Farmer*.

In that State the growth of this new phase of cooperation is being fostered by the farmers' union. A State-wide central purchasing organization has been formed, the actual buying agent being the Farmers' Union State Exchange at Omaha. Fourteen local organizations are now making all their purchases through the State association. Some of these are not members of the association, however, because they do not meet the requirement that 60 per cent of their shareholders be members of the farmers' union.

Since the State association was organized in May, 1927, 18 local organizations have purchased through it 114 carloads of gasoline and 40 carloads of kerosene.

Minnesota

THE cooperative oil companies in Minnesota have their central organization, the Minnesota Co-op Oil Co., which began business in March, 1927. The Northern States' Co-operator, in its issue of January, 1928, states that the net sales of the central company during the eight-month period ending December 1, 1927, amounted to \$257,654 and its net trading surplus to \$3,474. Approximately 500 carloads of gasoline and kerosene were bought during this period for 39 local associations.

The central association is organized on a nonstock basis, with membership fees of \$20 for each affiliating society. The payment of the fee, however, has not been enforced. The Northern States' Co-operator comments upon the situation as follows:

It is an extremely interesting fact that the Minnesota Co-op Oil Co. has been able to accumulate a quarter million business in eight months almost without a cent's capital. This has been possible only through the intelligent and loyal support of the 30 and odd cooperative oil associations that have patronized the State organization and through the fact that a man could be found who had such great faith in the future of the movement that he undertook to manage the concern without any initial capital, just banking on the loyalty of a few local groups who had pledged their support to it.

Cooperative Production by Indiana Farm Bureau

A N INTERESTING instance of practical cooperation between farmers and organized labor is noted in the January 28, 1928, issue of Labor. According to this account, the Indiana Farm Bureau takes wool sheared from the sheep, manufactures it into cloth at Columbia City, and then has a tailoring company make it into suits which are sold to farm bureau members. This tailoring company has a contract with the Amalgamated Clothing Workers, some of whose members it employs. The bureau also makes woolen blankets in the same fashion.

It was recently announced that the members of organized labor will hereafter be allowed to participate in these enterprises as consumers on substantially the same basis as the members of the farm bureau.

Condition of the Cooperative Movement in Various Countries

Austria

THE cooperative movement of Austria has had perhaps more difficult postwar conditions to meet than has that of any other European country. Not only were there the quite general conditions of unemployment among the members with resultant decrease of purchasing power, generally unfavorable industrial and economic conditions, and enormous inflation of the currency, but there was also the almost overwhelming disaster of losing, over night as it

were, nearly three-fourths of the cooperative membership and its resources by the partition of the country. The struggle for existence was long and difficult and was further complicated by the fact that the condition of the currency was such as to make it almost impossible to ascertain the true financial condition of the cooperative movement.

Data recently published for 1926 show a fairly general though not as yet complete recovery from the postwar difficulties, but the movement has not regained its pre-war status.

The report of the Union of German-Austrian Consumers' Societies, quoted in Cooperative Information No. 60 of the International Labor Office, shows that in the period 1913-1926 the number of affiliated societies has increased from 91 to 129 and their membership from 152,278 to 317,936. In the same period sales have increased from 67,167,155 to 129,447,172 schillings.¹

For the 74 societies which reported for both 1913 and 1926, membership increased 67 per cent and sales 137 per cent, while the average sales per member rose from 465 to 608 schillings; this latter, however, was practically nullified by the increase in retail prices.

Mrs. Emmy Freundlich, writing in the November, 1927, issue of the International Cooperative Bulletin, states that expenses of operation are higher than before the war, but still remain lower than those in other countries. "It must, however, be admitted that the gross surplus is nowhere so small as in Austria. The difference between the purchase and sale price in Germany is about 8 per cent higher than in Austria."

Assets in 1926 were 4,000,000 schillings more than before the war, and the share capital was 1,000,000 schillings less. This is ascribed to "low wages and the impoverishment of the whole people." Accounts receivable have increased because many members are compelled by "low wages and inadequate relief" to buy on credit. Reserves have increased considerably as compared with pre-war times, and savings deposited with the societies have also increased. Mrs. Freundlich states:

When the total figures are taken into account, it can not be said that the condition of our societies to-day is worse than it was before the war. All that is required is higher wages for the workers and an increase in the purchasing power. The development will then be speedy and the difficulties, especially the acquisition of capital, will be overcome.

Canada ²

DATA regarding the comparative development of the various branches of the cooperative movement in Canada have been scarce. In order to obtain at least a rough idea of this, the following figures have been compiled from an official report of the Canadian Department of Labor and the report of the Canadian Cooperative Union. These data can not be claimed to be entirely accurate, as the official report was simply a list of societies, classified as to type to some extent but grouping under "Miscellaneous" many kinds of societies. This group has been subdivided where it was possible to tell from the name or description of the society just what kind of business it was

¹ Schilling at par = 14.07 cents; exchange rate in 1926 about par.

² Data are from Canadian Department of Labor, Sixth report on organization in industry, commerce, and the professions in Canada, 1927; Canadian Cooperator, issues of August, September, and December, 1927; and Statistical Yearbook of Quebec, 1926.

engaged in. The miscellaneous group, as given below, without doubt still contains numerous consumers' societies as well as producers' organizations of various sorts. The data given for consumers' societies cover mainly those societies which are affiliated with the Canadian Cooperative Union and represent only a part of the whole consumers' movement in that country.

TABLE 1.—DEVELOPMENT OF VARIOUS TYPES OF COOPERATIVE SOCIETIES IN CANADA

Type of society	Number of societies	Number of societies reporting	Number of members
Agricultural societies:			
Vegetable growers.....	85	74	19,917
Dairy societies.....	54	46	22,478
Livestock, etc.....	100	85	61,880
Grain growers.....	197	149	286,403
Wool growers.....	13	13	1,044
Tobacco growers.....	2	1	2,300
Marketing farm produce.....	68	40	2,641
Fishing societies.....	14	12	408
People's banks (Quebec).....	122	122	33,279
Consumers' societies.....	21	19	7,804
Miscellaneous.....	285	215	17,641
Total.....	961	776	455,790

¹ Number reporting.

No data are available as to the amount of business done by the various types of societies. During 1925 the cooperative people's banks of Quebec made loans aggregating \$3,909,790, while the 20 local societies for which the Cooperative Union of Canada reported had sales for 1926 amounting to \$3,358,162. The share capital of these latter societies amounted to \$434,823, and their reserves to \$208,449. Net profit in the amount of \$230,535 was realized and of this \$165,062 was returned in purchase dividends.

At the 1927 consumers' cooperative congress a resolution was passed favoring the formation of an interprovincial cooperative wholesale society to take over the trading department of the United Farmers of Canada and appointing a committee to negotiate with the latter organization to that end. Provincial wholesales are also being considered in Saskatchewan, Alberta, and Manitoba.

France

THE yearbook of the National Federation of Consumers' Cooperative Societies of France³ for 1926-1927 contains summary data not only for societies affiliated with the federation but also for the independent societies. The method of compiling the statistics and the form of their presentation in the yearbook have been changed and this has retarded publication. The data relate only to the year 1924, but are of interest, since statistics of the cooperative movement of France are scarce.

Table 2, compiled from the report shows the development of the movement from 1922 to 1924:

³ Fédération Nationale des Coopératives de Consommation. Annuaire de la coopération (5^e année), 1926-1927. Paris, 1926.

TABLE 2.—DEVELOPMENT OF CONSUMERS' COOPERATIVE SOCIETIES IN FRANCE, 1922 AND 1924

Year and class of society	Total number of societies	Membership			Business		
		Number of societies reporting	Members	Average per society	Number of societies reporting	Amount	Average per society
1922							
Affiliated societies.....	1,937	1,562	1,338,708	857	1,564	Francs 1,116,670,256	Francs 713,983
Independent societies.....	2,363	2,278	991,161	435	2,169	630,553,037	290,711
Total.....	4,300	3,840	2,329,869	606	3,733	1,747,223,293	468,048
1924							
Affiliated societies.....	1,558	1,483	1,351,457	911	1,470	1,402,090,682	953,803
Independent societies.....	2,090	2,075	801,245	386	1,995	742,423,567	372,142
Total.....	3,648	3,558	2,152,702	605	3,465	2,144,514,249	618,907

It will be noted that the number of societies decreased. Many little societies were dissolved, while others were merged with larger organizations. The report states that "this tendency toward amalgamation manifests itself almost exclusively among societies organized through the efforts of the national federation." Some of the decrease in number of societies is due also to the elimination of societies which had a merely nominal existence.

It is seen that the societies affiliated with the national federation have shown a slight increase in size but the independent societies have become smaller. Both classes of organizations showed an increase in average sales.

There are in France 48 so-called "development societies." These are societies formed by the amalgamation of all the societies of an entire district. The increasing importance of these societies in the cooperative movement of France is shown by the fact that their sales, which formed 35 per cent of the combined sales of societies affiliated with the national federation in 1920, constituted 44 per cent in 1924.

Germany

ACCOUNTS seem to indicate increasing prosperity in the German cooperative movement. A report from Mr. J. K. Huddle, American consul at Cologne, deals with the annual congress of the German Cooperative Union (*Deutscher Genossenschaftsverband*), which is the organization of the Schulze-Delitzsch societies. From 1924 to 1926 the average working capital of these societies has risen from 360,000 marks⁴ per society to 790,000 marks per society, the paid-in capital stock rose from 81,000,000 to 194,000,000 marks, and savings accounts from 88,000,000 to 431,000,000 marks. The present combined working capital of societies of this type is stated to be 1,300,000,000 marks.

The same tendency is noted among the consumers' cooperative societies belonging to the Central Union of German Consumers' Cooperative Societies. Not only has there been a considerable

⁴ Gold mark = 23.8 cents.

increase in the business of these societies, but the savings deposits of members have increased at such a rate that the societies find it impossible to make use of all the money. The 1927 general convention of the union, therefore, decided to establish a cooperative mortgage bank and use the savings deposits to finance the building of homes for the members.⁵

The data below are taken from the 1927 yearbook of the Central Union of German Consumers' Cooperative Societies. Table 3 shows the development of the societies affiliated with the union as well as the growth of the wholesale society:

TABLE 3.—DEVELOPMENT OF CENTRAL COOPERATIVE UNION AND COOPERATIVE WHOLESALE SOCIETY, BY SPECIFIED YEARS, 1903 TO 1926

[Gold mark=23.8 cents]

Organization and year	Number of affiliated societies	Number reporting	Number of members	Amount of business	Value of goods manufactured	Reserves	Savings deposits of members
Central Union:				Marks	Marks	Marks	Marks
1903.....	685	639	575,449	176,450,549	14,712,751	3,531,595	6,199,791
1914.....	1,140	1,225	1,705,022	691,404,552	129,255,651	14,526,978	79,106,375
1920.....	1,293	1,201	2,715,633	417,808,648	69,310,062	3,442,597	49,140,505
1925.....	1,113	1,054	3,383,765	854,368,720	205,981,117	15,408,336	67,893,521
1926.....	1,093	1,039	3,197,751	1,052,697,214	240,549,392	18,863,728	109,123,732
Wholesale society:							
1903.....	266			26,445,889		59,500	
1914.....	813			157,524,040	10,475,273	8,053,531	
1920.....	1,003			91,549,934	11,720,857	1,202,175	
1925.....	894			228,169,471	35,339,389	5,714,821	
1926.....	888			294,173,971	45,675,780	7,893,614	

Below is shown the distribution of cooperators, according to their occupation in 1926:

	Number	Per cent
Independent tradespeople.....	176,816	5.62
Independent farmers.....	102,610	3.27
Professional and public employees.....	306,007	9.74
Wage earners in industry.....	2,086,851	66.45
Wage earners in agriculture.....	90,619	2.89
Persons without fixed occupation.....	377,767	12.03
Total.....	3,140,670	100.00
Occupations not reported.....	55,365	

Great Britain

THE cooperative movement of Great Britain continues its steady progress. "Notwithstanding the disastrous general strike of last year [1926] with its loss of earning and purchasing power, the British consumers' movement increased its sales by nearly £8,000,000 sterling,⁶ and for every working-day added 1,124 families to its purchasing membership. * * * On the total sales of nearly £200,000,000 sterling a surplus of £22,000,000 was distributed. * * * In other words, a return of £70,000 sterling was made daily on a daily turnover of £616,000—an 11 per cent saving on purchases."⁷

⁵ International Labor Office. Cooperative Information 58. Geneva, 1927, p. 3.

⁶ Pound sterling at par=\$4.8665; exchange rate approximately par.

⁷ International Cooperative Bulletin, London, October, 1927, p. 308.

The average number of members per society is 4,052. Ten societies have over 50,000 members, and 494 societies have fewer than 1,000 members.

Old fields of activity are constantly being widened and new fields entered. With a part of the £121,000,000 surplus accumulated by the cooperators, the Cooperative Wholesale in 1926 made advances to agricultural and primary producers in other European countries "to empower them to effectively market their produce without exploitation." The cooperative laundries of Manchester and the surrounding district have united, opening a federal laundry which, it is stated in the November, 1927, issue of *The Cooperative Review* (Manchester), is the largest laundry in the world. A cooperative hotel is being planned to be erected in London, which will contain 100 bedrooms and a restaurant. It will be run on cooperative lines, except that, instead of each member having one vote, an extra vote will be allowed for each full £100 of share capital owned in excess of £50.⁸

Workers' Productive Societies

THE 1927 yearbook of the central organization of the cooperative workshops of Great Britain, the Cooperative Productive Federation, contains data for 1925 for the 42 societies in affiliation with the federation. Table 4, compiled from the report, shows the development of these societies from 1924 to 1925:

TABLE 4.—DEVELOPMENT OF WORKERS' PRODUCTIVE ENTERPRISES IN GREAT BRITAIN, 1924 AND 1925

Industry	Number of societies, end of 1925	Number of members, end of 1925	Amount of sales		Net trading surplus	
			1924	1925	1924	1925
Clothing.....	8	5,936	£1,221,827	£1,285,669	£81,255	£76,304
Footwear.....	16	5,291	676,678	670,774	24,453	21,522
Printing.....	11	1,676	103,065	105,741	4,917	3,701
Miscellaneous.....	7	1,358	216,393	223,174	1,849	5,649
Total.....	42	14,261	2,217,963	2,285,358	112,474	107,176

Industry	Share and loan capital, end of 1925	Reserves, end of 1925	Number of employees		Average annual wage per employee	
			1924	1925	1924	1925
Clothing.....	£430,504	£145,118	2,951	3,078	£86.5	£89.2
Footwear.....	277,318	136,837	1,686	1,711	125.6	121.3
Printing.....	83,639	17,040	325	355	139.5	137.9
Miscellaneous.....	75,279	22,452	622	634	105.0	106.6
Total.....	866,830	321,447	5,584	5,778	103.5	103.6

The report points out that "the reduction of realized surpluses [from 1924 to 1925] both in amount and in proportion to sales is a little surprising, but may be partially attributed to less competition and also to falling wholesale prices, necessitating writing down of stock values. The results for the earlier half of 1925 were distinctly better than for the latter half in most cases. Unfortunately, industrial conditions compel the prediction that 1926 will prove to have been worse than 1925 in these respects."

⁸ Report from the office of the American Consulate General, London, July 12, 1927.

Japan

DATA given in the November, 1927, issue of the International Labor Review (Geneva) show that since 1906 the number of consumers' societies has increased from 2 to 129 in 1925, the membership from 2,184 to 119,946, the capital from 22,140 yen⁹ to 2,849,456 yen, and the sales from 230,599 yen to 21,372,081.

More than two-fifths (42 per cent) of the membership are salaried employees and 36.5 per cent are wage earners. The remaining 21.5 per cent are persons engaged in agriculture, industry, commerce, and miscellaneous pursuits.

Mexico

PRESS release No. 284 of the All American Cooperative Commission states that Mexican students have formed a cooperative society that is unusual in its field. It is a society for industrial, technical, and commercial training. It has opened workshops where teachers out of employment and students working their way through school may obtain work. A permanent exhibition has been opened in Mexico City, where the articles made by the members are on sale.

It is stated that after six months' operation, the society had cleared sufficient to purchase furniture, tools, and raw materials and had increased its original capital by 25,000 pesos.¹⁰ It has recently opened a cooperative restaurant and is planning, with a students' bank, to open a consumers' cooperative store.

Russia

AN ACCOUNT, recently issued, of the cooperative movement in Russia, written by Mr. N. Barou, director of the Moscow Narodny Bank¹¹ contains interesting data regarding the movement there. As is pointed out in the introduction to the book written by E. F. Wise, an English economist, much has been accomplished by the cooperative movement in various countries, yet "progress in Russia, both of consumers and of agricultural cooperation, in the last five years leads the world."

There are more than twice as many contributing shareholding members of consumers' cooperative societies as in any other country. There are many more actual societies than in any other country. A larger variety of agricultural products are now marketed cooperatively than in any other country. The cooperative movement plays a greater part in the business life and social and political education of the nation than in any other country.

The Russian movement may not have the solidity or the accumulated resources of the British movement. But it has concentrated into a decade or so the experience of tackling internal problems which in normal circumstances would have taken half a century to acquire. It makes up in courage, energy, and confidence what it lacks in length of experience. It has had the unique advantage of having taken a big, active part in the reorganization of a great country on lines along which its own principles predominate. The details of its organization and operation, the methods it has found effective, can not but make its study interesting to British readers.

It is stated that of the branches of the cooperative movement the consumers' societies have "the most extensive organization, the

⁹ Yen, at par=49.85 cents; average exchange rate in 1925 was 41.04 cents.

¹⁰ Peso at par=49.85 cents; exchange rate, October, 1927=47.66 cents.

¹¹ Barou, N.: The cooperative movement in the U. S. S. R. and its foreign trade. London, 1927.

largest membership, and the strongest financial position." They include in their membership 25 per cent of all the peasant families in the country, 63 to 64 per cent of all trade-unionists, and 75 per cent of the transport workers. They serve some 30 per cent of the whole trade of Russia. Agricultural cooperation also plays a very important part in the national economy. It is stated that the peasants in the Union of Socialist Soviet Republics derive a large part of their income from the sale of articles produced by them in their own households, and these peasant producers have formed their special cooperative organization through which their products are sold.

Mr. Barou gives the following data showing the relative development attained by each of the three branches of the movement:

TABLE 5.—DEVELOPMENT OF COOPERATIVE MOVEMENT IN RUSSIA

[Pound sterling at par = \$4.8665; exchange rate, about par]

Type of society	Number of societies	Number of members	Amount of business in—	
			1924-25	1925-26
Consumers' cooperatives.....	28, 739	11, 363, 000	£400, 846, 500	£667, 195, 767
Agricultural cooperatives.....	59, 500	7, 000, 000	123, 656, 080	224, 550, 264
Peasants' crafts cooperatives.....	13, 000	756, 000	43, 386, 243	107, 619, 047
Total.....	101, 239	19, 119, 000	567, 888, 883	999, 365, 078

Besides the domestic business, the cooperative organizations of Russia do a large business each year in the export of raw materials and the importation of manufactured goods and other commodities. During 1925 the central organizations' exports amounted to £8,154,296 and their imports to £4,059,840.

Sweden

A MOST interesting and readable account of the development of the cooperative movement in Sweden has recently been issued by the Cooperative Union of Great Britain.¹²

Although the word "cooperation" as a name for a form of economic activity appeared in the Swedish language as early as 1825, the first cooperative organizations did not appear until shortly after 1848, reaching a larger scale of development about 1865. These early societies almost without exception have dissolved or have lost their cooperative character, partly due to the absence of cooperative legislation.

The struggles and development of the consumers' cooperative movement since the beginning of the twentieth century have been typified by those of the Cooperative Union (the "K. F.") which was formed in 1899. Its formation is described as "the real starting point of Swedish cooperative development."

In the first year of K. F.'s existence 30 societies, with about 7,300 members, affiliated. As the need of a source of cooperative supplies was keenly felt, even at that early date, a cooperative wholesale

¹² Gjörres, Axel. *Cooperation in Sweden*. Manchester (England), Cooperative Union (Ltd.), 1927. (International cooperative series No. 5.)

society independent of K. F. was established in 1900 and began operations in the same year. Failure was inevitable. The new society had only some \$125 of capital, the Cooperative Union was as poor as the wholesale and could give no assistance, and the affiliated societies were in no position to advance more capital or even to pay cash for their goods. The little wholesale was forced to go out of business in 1903.

In 1904, however, on the authority of the convention of the preceding year, the Cooperative Union began to act as adviser and to assist the local societies in their buying, even acting in some cases as purchasing agent. During 1904 the sales so made amounted to some \$75,000, but by 1906 these had increased to over half a million dollars. Encouraged by this growth, the movement began to increase its activities.

Even this modest success had, however, attracted the unfavorable attention of private dealers, and in 1906 there began the first of a long series of attempts to exterminate the new movement. Several firms which had entered into trading relations with K. F. were persuaded to repudiate their agreements with it. The result was to force the union, which hitherto had acted only as agent, to purchase on its own account and to open up a warehouse for the storage of goods. This provoked a new attack; this time the margarine combine, of which the union had made large purchases for its local societies, refused to recognize the union, later extending its action to the local societies as well.

This move the union met by the purchase of a small factory not in the cartel and by declaring a boycott against the products of the two largest manufacturers of margarine. A price war ensued, the Cooperative Union financing its losses and operations by a "people's loan." This lasted for two years, ending in the destruction of the combine. In 1911 the union was boycotted by the soap and chocolate manufacturers and finally by the sugar trust. The first two boycotts the union overcame without much difficulty and met the third by importing sugar from Germany.

General denial of credit by the banks was another device resorted to, but without success.

The net result of all these attacks was to bring the movement to the notice of the general public and to quicken the interest and pride of the people in this new movement that was fighting for the people's cause so courageously. New members were drawn to the movement and additional societies to the union. By 1913 the individual membership of the local societies in membership with K. F. had passed the 100,000 mark. The World War served further to stimulate interest in cooperation and membership increased rapidly during that time. Nor did the membership fall off after the close of the war, as it did in so many countries. By 1925 the combined membership of the societies affiliated with K. F. had risen to more than 300,000.

Cooperation was demonstrated to be no longer any kind of fad or cult but a citizen movement in the truest sense, and more and still more of the Swedish people are coming to recognize in this movement a significant and important factor in economic progress. And this high appreciation has been honestly earned. Since the war cooperation has entered upon productive activities, and established them in areas where previously powerful monopolies had ruled and had dictated a price policy that had been to the serious disadvantage of the great mass of consumers. By embarking on its own account in these industries—

here we have principally in mind margarine manufacture and flour milling—cooperation has dealt a serious blow to monopolist autocracy and has reestablished the full free play of supply and demand on prices. In this plain proof, open and simple to the whole nation, of the general social standard of a cooperative movement lies, beyond any doubt, one of the most potent reasons and explanations for the remarkable advance made during the period under review.

Attacks upon the union had not ceased with the war. The margarine factory of the union had been outgrown and was sold in 1914. The cartel which had disbanded as a result of the struggle between it and the Cooperative Union was later revived and in the absence of competition began to enforce monopoly prices upon the consumer. In 1921 the union erected a new factory, the product of which was sold at a price which would, after paying expenses and providing reserves, yield a 3 per cent dividend to the purchasing societies. "Its influence on margarine prices was immediate and emphatic. Week after week these crumbled down until at present they have fallen to about half of the prices prevailing before the cooperative factory disturbed the plot."

Of even greater value has been the intervention of K. F. "in the flour-milling industry." A combine uniting all the millers of the country had succeeded in enforcing exorbitant prices. "Parliament, and the press, and the country at large were deeply incensed that the ring should, year after year, levy [upon] the daily bread of the common people, but unperturbed by any protest or complaint the cartel continued to exploit its opportunities until at last the cooperative movement took up arms." In 1922 K. F. bought one of the largest of the mills, and after remodeling and modernizing it began the manufacture of flour in 1924.

Thus commenced a struggle which the whole country has followed with rapt attention and which has resulted in very substantial curtailment of the lavish margin till then separating the raw-material cost and the flour-selling price. Driven by the competition of the cooperative mill, the cartel has been compelled unceasingly to adjust its prices, and the saving assured to the consumers of Sweden may be reckoned, so far, as somewhere in the neighborhood of 8,000,000 kronor.¹³

A second mill was later taken over so that to-day some 25 per cent of all the flour produced in machine mills in Sweden comes from the mills of the K. F.

Another article on which a monopoly price had been maintained was goloshes, which are a very important commodity in a country like Sweden. Failing of success in its attempt to induce the cartel to reduce its prices, K. F. bought a controlling interest in one of the combine firms and has been sole owner since July, 1927. The union also operates a shoe factory, a spice-packing establishment, and a chemicals and sundries factory.

Constitution of the Consumers' Cooperative Movement

ALL classes of people are represented in the membership of the consumers' cooperative movement of Sweden, from the low-paid laborers to (in one case) a prince of royal blood. The composition of the membership of K. F. in 1925 was as follows:

¹³ Krona at par = 26.8 cents; exchange rate about par.

	Per cent
Industrial and factory workers.....	29.3
Other workers.....	20.5
Farmers and small holders.....	15.2
Clerks, public employees, etc.....	8.2
Employees of small workshops.....	5.2
Farm laborers.....	4.7
Proprietors of small workshops.....	3.1
Professional classes, civil service employees, etc.....	2.4
Corporations.....	1.0
Others.....	10.4
Total.....	100.0

The writer notes that:

Throughout the country generally the tendency is toward a general social admixture, which gives cause for much satisfaction, since cooperation in its essence is not a movement peculiar or copyright to this or that class, but seeks to include all. This development is the more gratifying in that there has been not the slightest sign accompanying of any ill will between the various groups, but all have put aside their class or political interests and have united in common labor on the problems cooperation aims to solve.

Types of Cooperative Societies in Sweden

DETAILED statistics of the cooperative societies of various sorts are contained in a report recently issued by the Swedish Office of Social Affairs,¹⁴ covering the year 1925. According to this report the number of societies in operation on December 31, 1925, was as follows:

Consumers' societies:	Number
Stores.....	1,580
Restaurants and cafés.....	80
Housing.....	1,387
Other construction.....	2,740
Electricity.....	1,526
Central organizations.....	26
Other.....	881
Total.....	8,220
Productive societies:	
Agricultural—	
Purchase of raw materials.....	1,546
Purchase of machinery.....	285
Peat.....	92
Dairies.....	681
Breweries.....	39
Egg marketing.....	99
Breeding.....	308
Distilleries.....	90
Agricultural banks.....	171
Central organizations.....	36
Other.....	224
Total.....	3,571

¹⁴ Sweden. [Social departementet.] Socialstyrelsen. Kooperativ verksamhet i Sverige år 1925. Stockholm, 1927.

Productive societies—Continued.

Other—	Number
Workers' productive.....	153
Stevedore.....	28
Printing.....	79
Credit.....	99
Total.....	359
Grand total.....	12,150

Of the total number of 949 consumers' societies in Sweden in 1925, 886, with 313,543 members, were affiliated to the Cooperative Union, while 63, with 11,678 members, were independent.

FAMILY ALLOWANCES AND CHILD ENDOWMENT

London Conference on Family Allowances ¹

ON OCTOBER 14 and 15, 1927, a public conference on family allowances was held under the auspices of the British Family Endowment Society at the London School of Economics. A large number of important local and national organizations were represented at this meeting.

A resolution was carried urging "the Government to appoint a royal commission which shall make inquiries into the question of family allowances in all its aspects and shall make recommendations as to whether, and if so, by what methods, a system of family allowances should be introduced."

Special attention was given to various possible methods of financing a family endowment scheme. Mr. J. L. Cohen advocated a social insurance system and estimated that, at a flat rate of 6 shillings per week per child under 16 years of age, the cost per annum would be £160,000,000.² He suggested that the State, employers, and the workers contribute equally to this fund, at the rate of ls. 8d. per week per worker.

Mr. H. N. Brailsford was in favor of a scheme under which the total cost of family endowment would be met by the State. This is the plan which has the backing of the Independent Labor Party of Great Britain.

The equalization fund system was described by Mr. John Murray.

Various other problems were discussed, Sir William Beveridge and Dr. R. A. Fisher taking up the question of the possible reaction of family endowment upon population. The available information on this subject "did not appear to be adequate to enable any conclusions to be reached."

The physiological basis of a minimum wage and minima for families of different sizes were presented by Professor Mottram.

Miss Eleanor Rathbone proposed the introduction of various kinds of experimental family endowment schemes—for example, a State system for civil servants and teachers; an equalization fund system for the coal mining industry; and contributory insurance schemes for friendly societies and various professions. She held that under the existing wage system an immense proportion of children were being unsatisfactorily brought up and "that a case had been made out for the appointment of a royal commission to inquire into the whole subject of family endowment."

¹ Family Endowment Society. Monthly Notes, London, October, 1927, p. 1; International Labor Office. Industrial and Labor Information, Geneva, Nov. 21, 1927, p. 227.

² At par, pound = \$4.8665, shilling = 24.3 cents, penny = 2.03 cents. Exchange rate is approximately par.

Western Australia Labor Report on Child Endowment

A REPORT on child endowment made by a committee appointed by the Western Australian Labor Party was presented to a special conference of trade-unions held at Perth, July 27, 1927.¹

A summary of certain sections of the document is given below.

At the outset the committee insists that "any system of endowment for children based on a rearrangement of wages either on the foundation of a man, or a man and wife, would not only involve a considerable reduction in the sum of the basic wage, but as a further consequence would also mean that the workers generally would suffer reductions in the amounts payable to them under other acts, such as the workmen's compensation act." In fact it would be equivalent to a reduction of the basic wage which is now established for a family consisting of a man, wife, and two children.

According to the committee, the contemporary Governmental proposals for child endowment have involved a reduction of the basic wage, the argument being that employers are allegedly supporting large numbers of children who are nonexistent.

The following statistics for the Commonwealth are presented in the section of the report on workers affected:

Number of male wage earners, unmarried	600, 000
Number of male wage earners, married, with grown children	135, 000
Number of male wage earners, married, with no children	100, 000
Total	835, 000

As the total number of adult salaried employees and wage earners in the Commonwealth is estimated at approximately 1,470,000, the committee contends that almost 60 per cent of these would suffer a reduction in wages if the basic wage is fixed for an adult male or a man and wife instead of for a family of four or five.

The impossibility of enacting uniform family endowment legislation in six different States was also emphasized.

The following fundamental principles were formulated by the committee:

1. That wages be computed to insure a reasonable standard of life, having regard to the domestic obligations of the average worker. This means a man, wife, and two children.

2. That endowment be assured for each child in every family in excess of two.

3. That wages are an economic charge on industry; that endowment is a social obligation on the community.

4. That endowment is related only to the extent of the family. It is not to be regarded as a corrective of arbitral deficiencies but as the right of the child. Furthermore, child endowment should be entirely independent of wage margins for skill. The persistent refusal of wage-fixing tribunals to apply index numbers to the wage of the skilled worker has reduced the margin proportionately from 50 per cent to 28 per cent over the basic wage, and any mixing of margins with family endowment would further penalize the skilled workers in the same direction.

5. For the purpose of the endowment the occupation of the father should be disregarded. Whether working under an award or not, it is to be assumed that his income is based on what would provide for a man, wife, and two children, and whether employee or not the children in the family in excess of two should be endowed.

¹ Australian Labor Party, Western Australian Division. Special conference of unions to consider child endowment. [Report of committee.]

It is estimated by the committee that about 600,000 children from all classes would be eligible for endowment under its proposed scheme. A weekly allowance of 5s.² per child was declared to be inadequate. The proper amount should, the committee thought, be determined by investigation and the fund to meet the expense should be raised by taxation. In this connection the report declares that "a nation which can pay 10,000,000 [pounds] more in 1926 than in 1922 in taxation for purposes other than child endowment can find the money for the latter if only it has the will to do so."

The Australian Worker of August 3, 1927 (p. 6), states that the Perth conference of trade-unions to which the above report was submitted indorsed the child endowment policy of the Western Australian Labor Party and decided to back a Commonwealth endowment scheme providing for 10s. 6d. per week per child in excess of two, together with endowment for all dependent children of widows, deserted wives, and unmarried mothers.

² Shilling at par=24.33 cents; average exchange rate for July, 1927=24.28 cents.

WORKERS' EDUCATION AND TRAINING

Work of Federal Board for Vocational Education, 1925-26, 1926-27¹

DURING the fiscal year 1926-27 satisfactory cooperative relations continued between the Federal Board for Vocational Education and the various States. The principal administrative matter with which the board and the States were interested during this period was "the submission for approval of new State plans for the next five years." These plans represent very definite progress in State programs and questions which have arisen in this connection have been satisfactorily adjusted. All States and the Territory of Hawaii are now cooperating under the national vocational education act. The total number of States now developing programs under the national civilian vocational rehabilitation act is 41, including Florida and South Carolina, which accepted the terms of this law during the fiscal year 1926-27.

As will be recalled, the vocational education and civilian vocational rehabilitation programs are financed from (1) Federal funds, (2) State funds, and (3) funds provided by local communities. The use of the Federal funds under the provisions of the Federal vocational education act and the Federal civilian vocational rehabilitation act is dependent upon the matching, at least, of these Federal funds by funds from the State or local communities or both. Indeed, the funds expended within States under both national acts and complementary State laws, have in numerous instances exceeded the sums required to match Federal funds—in some cases being four or five times greater.

In terms of totals, for the fiscal year covered by the preceding [1926] report, for each dollar of Federal funds there was provided for vocational education by the States \$2.54 and for civilian vocational rehabilitation \$1.19. This year [1927] the figure for vocational education is \$2.65 and for civilian vocational rehabilitation \$1.23.

Vocational Education

The following statement shows the number of reimbursement units federally aided for the years ending June 30, 1926 and 1927:

Number of reimbursement units federally aided, 1925-26 and 1926-27

	1925-26	1926-27 ²
Agricultural schools:		
Evening.....	895	1, 049
Part-time.....	204	248
All-day.....	3, 081	3, 339
Day unit course.....	312	261
Total.....	<u>4, 492</u>	<u>4, 897</u>

¹ United States. Federal Board for Vocational Education. Eleventh annual report, 1927. Washington, 1927.

² Figures for 1926-27 are provisional, subject to final audit of State accounts.

Trade and industrial schools:	1925-26	1926-27 ¹
Evening-----	666	705
Part-time-----		
Trade extension-----	210	220
General continuation-----	572	566
All-day-----	305	335
Total-----	1,753	1,826
Home economic schools:		
Evening-----	670	769
Part-time-----	113	103
All-day-----	1,023	1,101
Total-----	1,806	1,973
Grand total-----	8,051	8,696

The total expenditure of Federal, State, and local money for vocational education in the fiscal year 1926-27 was \$24,553,332, an increase of \$1,371,632 over the preceding year.

The combined Federal, State, and local expenditures under the Federal vocational education act for different types of education for 1925-26 and 1926-27 are as follows:

	1925-26	1926-27 ¹
Agricultural-----	\$7,164,460	\$7,469,295
Home economics-----	3,137,392	3,337,828
Part-time general continuation-----	4,456,729	4,875,955
Trade or industrial-----	6,194,108	6,463,109

The combined Federal, State, and local expenditures under the vocational education act for teacher training in the last two fiscal years are as follows:

	1925-26	1926-27 ¹
Agriculture-----	\$797,143	\$811,887
Home economics-----	725,650	817,563
Trade or industrial subjects-----	706,216	740,988
Total-----	2,229,009	2,370,438

According to the report under review the enrollment of pupils in vocational courses in the federally aided schools was 31,567 greater in 1926-27 than in 1925-26 and in the same period the number of teachers of such courses in these schools was increased by only 183:

Pupils:	1925-26	1926-27 ¹
Males-----	406,690	449,668
Females-----	346,728	335,317
Total-----	753,418	784,985
Teachers:		
Males-----	11,808	12,259
Females-----	6,909	6,641
Total-----	18,717	18,900

¹ Figures for 1926-27 are provisional, subject to final audit of State accounts.

² Includes 12 coordination centers.

In the fiscal year 1926-27 the enrollment in public vocational schools organized according to State plans approved by the Federal Board for Vocational Education, both federally aided and not federally aided, totaled 911,626, an increase of more than 26,000 over the preceding year as shown below:

	1925-26	1926-27
Male pupils.....	464, 509	505, 214
Female pupils.....	420, 766	406, 412
Total.....	885, 275	911, 626

Trends in Vocational Education

THE Federal Board for Vocational Education views with approval—
(1) The tendency to establish vocational education programs in cooperation with the representatives of occupations with which the courses deal.

(2) The tendency to develop cooperative apprenticeship programs carried on with the joint cooperation of labor, employers, and the public-school authorities.

(3) The tendency to make more adequate provision for both youths and adults who are employed.

Civilian Vocational Rehabilitation

AS SAID above, 41 States are now cooperating under the civilian vocational rehabilitation act, the only States that are not at present so cooperating being Connecticut, Delaware, Kansas, Maryland, Texas, Vermont, and Washington. Since the Federal civilian vocational rehabilitation program was inaugurated "29,126 disabled persons have been refitted or retrained and have been established in self-supporting employment."

In the last fiscal year (1926-27) 5,092 disabled persons were reestablished. The report for that year also states that there are 16,148 persons in course of rehabilitation in the 41 States now doing such work and that 132 persons are engaged in this service.

In 1926 the cost of civilian rehabilitation per person was \$233; in 1927, \$255.70.

In this connection attention is called to the cost of \$300 to \$500 in most of the States for the maintenance in a custodial institution or poorhouse of a person who is not able to work.

Brookwood's Seventh Scholastic Year ¹

IN ITS seventh scholastic year (1927-28) there are 35 students at Brookwood resident labor college. These students (20 men and 15 women) are from 13 States and Canada and represent the following 15 different occupations: Miners, railway carmen, electricians, painters, garment workers, cap makers, hosiery workers, textile workers, upholsterers, bakers, leather-goods workers, machinists, and food workers.

¹ Brookwood Review, Katonah, N. Y., October-November, 1927, pp. 1, 3.

The courses, which cover from one to two years, are based mainly upon the past experience of the labor movement. There are six full-time instructors and one on part time on the regular teaching staff. Lectures are also given by various representatives of educational institutions, business organizations, and trade-unions, both from this country and abroad.

"A distinctive feature of the Brookwood classes is the contribution to discussion made by the students, all of whom have been active in the labor movement."

As the cost of board and lodging at Brookwood is low—only \$450 per annum for scholarship students and \$200 for those paying their own expenses—students are called upon to contribute seven hours' labor per week. The work is assigned by a committee of three students elected by the student-faculty education committee. An effort is made to assign work for which the students are especially fitted by their respective trades.

Since its establishment in 1921 Brookwood College has graduated and returned to organized labor's ranks some 90 trade-unionists. A considerable percentage of these hold positions in their organizations. Others though not union officials are engaged in valuable trade-union organization work or in teaching workers' education classes.

Foremanship Training in the United States

FOREMANSHIP training is growing rapidly in the United States, according to data obtained in the third annual survey conducted by the department of manufacture of the Chamber of Commerce of the United States.¹ It was found that 933 courses² in foremanship were being given in June, 1927, as compared with 324 in June, 1926, and 105 in June, 1925. Practically every line of industry was represented in the 590 separate plants or organizations giving such instruction.

Only three States—Mississippi, Nevada, and North Dakota—reported no foremanship courses in 1927, as against 11 in 1926. There was an increase in number of courses in 26 of the 38 States in which they were being given in 1926, in 6 there was no change, and 6 showed a decrease.

Public educational agencies were conducting 482 of the courses in 1927, and private agencies 451. The report explains that the work of the public educational agencies includes "all foremanship instruction supported in whole or in part by public education funds. It includes work conducted directly or indirectly by State vocational education departments, by the extension divisions of various State universities, by city school systems, and by other agencies designated to receive public funds for the carrying on of such instruction." Under private agencies are included chambers of commerce, manufacturers' associations, the Y. M. C. A., private schools, and individual companies, these bodies receiving no public education funds. The number of courses listed under public educational agencies is believed

¹Chamber of Commerce of the United States. Department of Manufacture. Growth of foremanship courses in the United States, June, 1926, to June, 1927. Washington [1927]. Mimeographed.

²The word "course" is used in the report to mean a series of meetings devoted exclusively to foremanship without reference to the method of instruction, such as conference method, lecture method, etc. No statistics on correspondence instruction are included.

to be complete, but the report points out that there may be omissions from the number listed under private agencies.

Certain of the university extension agencies, while State supported, do not participate in Federal vocational education funds, under the Smith-Hughes Act, dispensed through the State departments for vocational education, and consequently they charge for foremanship instruction. These are: Massachusetts State Division of University Extension; industrial extension division of Rutgers University; the State University of New Jersey; department of engineering extension of Pennsylvania State College; and university extension division of University of Wisconsin. All of the other public educational agencies, including other university extension divisions, which conduct these courses, are believed, the report states, to be receiving Federal financial assistance under the Smith-Hughes Act and are therefore not permitted to charge for instruction.

An analysis of 789 of the courses recorded for 1927 showed that in 16.5 per cent of them meetings were held daily; in 9.5 per cent, semiweekly; in 50.4 per cent, weekly; in 12.6 per cent, semimonthly; and in 8.5 per cent, monthly; in 2.5 per cent the period was not stated. The average length of the meetings was found to be about one hour and a half. The average number of foremen reached per course was 28.15 in 1927 (as compared with 25.80 in 1926), and the average number of hours of instruction per foreman, 23.82.

The report states that there is a definite tendency to place foremanship training on an organized and permanent basis, that better and more leaders are being trained for the work, and that manufacturers' associations, trade associations, chambers of commerce, and other institutions are coming more and more to the assistance of the individual company. In answer to the question, "Is foremanship training of value?" the statement is made that "probably the most conservative yet most eloquent answer is that the companies which have been at it longest—five to eight years—are continuing and in many instances enlarging their programs. True, a few have not succeeded as they had wished, but in practically every case they attribute it to conditions or methods. At the same time they express confidence in the general principle. * * * Accumulated experiences and results show that foreman training must be handled with care to produce the best results."

The great increase in courses within the short period from 1925 to 1927 bears eloquent testimony to the fact that to-day industry regards the trained foreman as a most important factor in management.

The greater use of intricate and expensive machinery requires not only better trained attendants but better selected and equipped foremen to lead the personnel for more effective production.

Reorganization of Belgian Superior Council of Technical Education¹

A DECREE providing for the reorganization of the Belgian Superior Council of Technical Education was issued November 20, 1927. The provision of occupational and technical education has not been the subject of any organic law in Belgium, but a

¹ Comité Central Industriel de Belgique. Bulletin, Dec. 7, 1927, pp. 1395-1402.

superior council having supervision over technical education has been in existence since 1906.

The importance of clarifying and systematizing the regulations governing the provisions for working-class education, from the standpoint of the economic restoration of the country, has been urged for some time by employers and workers. The trade-union committee of the Belgian Labor Party and the General Confederation of Christian Trade-Unions have devoted special sessions to the consideration of the problem and the Central Industrial Committee (employers) appointed a permanent committee for the same purpose, while Provinces and cities have appointed consulting committees on technical education.

The council ceased to function during the war but was reorganized in 1919. It met many difficulties in providing the necessary schools and teachers, but in spite of this fact considerable advancement has been made. In 1927 the number of schools and occupational courses under the control of the State was 1,276, and the pupils in these courses numbered 125,000, of whom 90,000 were young men.

The principal needs to be met by the reorganization were the institution of budgetary control whereby a proper division of the subsidies between the different schools should be made, securing better statistical information relative to industrial and occupational education, the separation of the inspection and administrative branches, and the creation of a purchasing commission for all the subsidized institutions.

The council as reconstituted is made up of 44 members appointed for a term of three years. The employers' and the workers' representatives are chosen after consultation with the most representative associations of the two groups. The council is made up of four sections, as follows: Industrial and occupational education of boys, commercial education, mechanical arts (*metiers d'art*), and occupational education of women.

A permanent committee (which includes the president of the council, the director general of technical education, and the chairman of each of the four sections and their secretaries) meets once a month, while the sections meet when called by the president of the council, which must be at least once every three months. A general assembly of all members of the council is held once a year.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in January, 1928

DATA regarding industrial disputes in the United States for January, 1928, with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

The bureau has no machinery for the prompt and full reporting of strikes and lockouts. Practically all the more important industrial disputes come to the attention of the conciliation service of the Department of Labor and through the courtesy of the conciliation service the Bureau of Labor Statistics has access to the reports received by that office. Otherwise, the bureau must depend largely upon newspapers, trade journals, and labor periodicals for preliminary reports of disputes. These preliminary reports are followed up by correspondence with the various parties concerned and, when necessary, by personal visits of representatives of the conciliation service and of the Bureau of Labor Statistics.

For these reasons, the data here presented do not pretend to be absolutely complete or fully accurate. It is believed, however, that practically all the more significant strikes and lockouts are recorded and that the information submitted is sufficiently accurate to give a fair presentation of the situation in the United States in the matter of strikes and lockouts.

Table 1 is a summary table showing for each of the months—June, 1927, to January, 1928, inclusive—the number of disputes which began in these months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question. It is to be noted that the figures given include only those disputes which have been verified by the bureau.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JUNE, 1927, TO JANUARY, 1928

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
June, 1927	75	82	18, 585	196, 047	4, 859, 468
July, 1927	62	62	33, 763	199, 087	5, 307, 089
August, 1927	53	50	8, 066	198, 367	4, 998, 596
September, 1927	46	49	12, 514	197, 588	4, 960, 249
October, 1927	48	56	12, 695	81, 766	2, 722, 110
November, 1927	26	50	4, 089	82, 207	2, 031, 740
December, ¹ 1927	21	47	3, 990	80, 887	2, 123, 880
January, ¹ 1928	29	59	17, 148	82, 809	2, 123, 881

¹ Preliminary figures subject to revision.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives, by industry, the number of strikes beginning in November and December, 1927, and January, 1928, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN NOVEMBER AND DECEMBER, 1927, AND JANUARY, 1928

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	November, 1927	December, 1927	January, 1928	November, 1927	December, 1927	January, 1928
Automobiles.....	1			7		
Bakers.....	1		1	7		63
Barbers.....		1			21	
Building trades.....	3	2	4	106	850	73
Chauffeurs and teamsters.....	1	1		118	150	
Clothing.....	8	2	9	894	245	13,180
Electrical and gas supply workers.....		1			93	
Furniture.....	1	3		32	108	
Glass.....	1			520		
Laundry.....		1			15	
Leather.....			1			71
Longshoremen and freight handlers.....		1			600	
Metal trades.....	1	1	2	52	26	200
Mining.....	3	3	2	2,009	1,375	1,450
Oil and chemical workers.....		1			200	
Printing and publishing.....	1	2		21	125	
Slaughtering and meat packing.....			1			700
Stationary engineers and firemen.....			1			28
Street railway employees.....			1			200
Textile workers.....	4	2	5	173	182	777
Miscellaneous.....	1		2	150		406
Total.....	26	21	29	4,089	3,990	17,148

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in January classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN JANUARY, 1928, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in January, 1928, involving—					
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers	5,000 workers and over
Bakery workers.....		1				
Building trades.....	3	1				
Clothing.....	2	2	2	1		2
Leather.....		1				
Metal trades.....		1	1			
Mining.....			1		1	
Slaughtering and meat packing.....				1		
Stationary engineers and firemen.....		1				
Street railway employees.....			1			
Textile workers.....	1	1	3			
Miscellaneous.....	1		1			
Total.....	7	8	9	2	1	2

In Table 4 are shown the number of industrial disputes ending in January, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN JANUARY, 1928, BY INDUSTRIES AND CLASSIFIED DURATION

Industry	Classified duration of strikes ending in January, 1928					
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 4 months	4 months and less than 5 months
Bakers.....	1					
Building trades.....	5			1		
Clothing.....	4					
Laundry.....		1				
Leather.....	1					
Mining.....	1					
Textile.....	2			1		
Total.....	14	1		2		

Principal Strikes and Lockouts Beginning in January, 1928

SHOE workers, Massachusetts.—On January 19 a strike of shoe workers began in Haverhill, involving directly some 6,500 persons and about 78 shops. In addition, several thousand employees were thrown out of employment. The strike was in protest against a reduction by the manufacturers in the wage scale for 1928 ranging, as alleged, from 10 to 30 per cent.

Some of the employing companies were members of the Haverhill Shoe Manufacturers' Association, whose agreement with the Shoe Workers' Protective Union did not admit of strikes before 1929. Under this "peace pact," which has been in operation for several years and still has about a year to run, the Haverhill Shoe Board announced in December what its neutral arbitrator described as a cut averaging 10 per cent. This affected the concerns in the manufacturers' association and was a guide to others. The manufacturers claimed that it reduced the labor cost per shoe only 3 to 8 cents, while the unions claimed it was one of the most drastic reductions on record.

Under the agreement between the association and the union barring strikes, all disputes have been referred to a board of arbitration with a neutral chairman, whose salary is paid jointly by the association and the union. The recent award was very displeasing to the workers. Resistance to it caused a stoppage of the production in Haverhill that was well-nigh complete. With a few exceptions among independent manufacturers, the plants were practically reduced to idleness.

On January 20 it was announced that about 1,500 of the striking workers had returned after 13 independent factories had agreed to pay the 1927 scale, and by January 24 it was announced that a total of 36 independent shops, employing more than 50 per cent of the strikers, had agreed to pay that scale.

The strike was settled on the afternoon of January 29, when the manufacturers agreed to restore the 1927 scale. They also agreed

to return the amount deducted since January 1, 1928. The agreement ending the strike, as reported in the press, reads as follows:

It is hereby agreed by and between the Haverhill Shoe Manufacturers' Association and the Shoe Workers' Protective Union—

1. The workers shall return to work in their respective places and be paid 1927 prices.

2. A committee of three from the association and three from the union shall be elected or appointed for the purpose of amending the peace pact.

3. A committee of three from each side shall be elected to inquire into the conditions prevailing in the industry and report their findings to both parties, with recommendations; the committee to have full authority.

The work of paragraphs 2 and 3 to be done by the same committee.

4. The wages deducted by the employers shall be returned to the workers within three weeks from the day they return to work.

The wooden-heel workers of the Haverhill shoe industry were also involved in a brief strike from January 3 to 5 in opposition to a proposed reduction by the manufacturers, ranging, it is said, from 10 to 30 per cent. The proposed reduction was in line with the decision of the shoe board, composed of a neutral arbiter and a representative from each side.

About 25 factories and 1,100 workers, members of Local No. 11, Shoe Workers' Protective Union, were involved.

A compromise agreement, drawn up by the manufacturers' and workers' committee, carrying reductions ranging, it is said, from 5 to 15 per cent, was accepted and the workers returned.

Clothing workers, New York.—A successful strike by workers on children's clothing in New York City, "against wage reductions and sending work to nonunion contractors," was conducted by the Amalgamated Clothing Workers of America. This strike began January 26 and ended January 31. Two hundred firms and contractors and 5,500 workers were reported as involved.

Principal Strikes and Lockouts Continuing Into January, 1928

BITUMINOUS coal strike.—This strike still continues in part, as outlined in former issues of the Labor Review.

The joint wage commission of Illinois, established by the agreement of October 1, began on January 4 the sessions for considering the contentions of each party on the question of establishing a competitive wage scale in Illinois mines, with a view to reaching a decision by February 7, the date specified in the present truce agreement.

Immediately after the signing of the truce agreement the Illinois Coal Operators' Association appointed a special committee, composed of two members from each of the mine districts in the State. This committee, which was formed for the purpose of presenting to the joint wage commission the facts and conditions relevant to a new wage agreement in Illinois, has been in session almost continuously since the date of its organization.

Under the rules of the joint commission the operators and miners were required to submit their contentions in writing on or before December 31, 1927. On that date the operators filed with the commission statements showing in detail the situation of the coal-mining industry in Illinois and the necessity for a substantial wage reduction in addition to a change in working conditions. It is understood that the miners have also presented their contentions to the commission in writing, according to schedule.

On February 9 it was reported from Chicago that efforts to adjust differences between union coal miners and mine operators in Illinois had ended in failure on February 8, with no further joint meetings scheduled. The chief point of contention in the conferences has been the wage scale. The present temporary agreement, which expires April 1, carries the Jacksonville scale of \$7.50 a day. The operators, it is said, asked for a reduction of the present wage scale from \$7.50 to \$6 per day, the pay for tonnage to be 84 cents a ton and the period of contract to range from one to five years. This was rejected by the miners, who demanded a renewal of the \$7.50 a day scale and a rate of \$1.08 per ton for miners who are employed on a tonnage basis.

On February 16 the Senate adopted a resolution (S. Res. 105), introduced by Senator Johnson, directing the Interstate Commerce Committee of that body to investigate strike conditions in the bituminous coal fields of Ohio, Pennsylvania, and West Virginia. Senator Watson, the chairman of this committee, announced on February 18 the appointment of a special subcommittee, composed of Senators Gooding, chairman; Metcalf, Pine, Wheeler, and Wagner, which will investigate conditions but will not hold hearings.

Coal miners, Colorado.—The strike of coal miners in Colorado continues in part with varying degrees of intensity.

After several weeks of comparative inactivity the strike took on new life with the arrest by State police on January 4 of about 125 strike sympathizers for mass picketing in Huerfano and Fremont Counties. A clash occurred between the police and strikers at Walsenburg on January 12, resulting in the death of two miners and the wounding of two others. The coroner's jury returned a verdict on January 16 finding the State police responsible for the death of one of the persons referred to. This was followed by a statement by the mayor of Walsenburg announcing himself as strongly behind the police.

Representatives of the Calumet Fuel Co., operating two mines in Huerfano County, in the southern field, notified the industrial commission of the State early in January that their officials had decided to meet the raise to a basic day scale of \$6.52, announced by the Colorado Fuel & Iron Co and effective January 1.

Meanwhile, it is said, the strikers' State executive committee, controlled by the I. W. W., continues to demand that the right to pit committees at all mines and to other concessions be met before it will order the men back to work, pending the commission's award in its present investigation. The committee also insists that the strike can not be settled permanently until the operators are willing to recognize some form of miners' organization and to pay the Jacksonville scale, or a basic wage of \$7.75 per day.

It was reported early in January that the commission had ended its hearings at Denver on northern field conditions and would next open a hearing on the El Paso district at Colorado Springs. No award or decision is expected to be announced until hearings have been completed in all fields.

SUPPLEMENTARY NOTE.—It was announced at Denver on February 20 that this strike was called off February 19, when 88 per cent of the striking miners voted to return to work. It was also stated that the governor would withdraw National Guard troops and State police who have been on duty in the various strike areas.

Conciliation Work of the Department of Labor in January, 1928

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 24 labor disputes during January, 1928. These disputes affected a known total of 16,695 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On February 1, 1928, there were 52 strikes before the department for settlement, and, in addition, 12 controversies which had not reached the strike stage. The total number of cases pending was 64.

CONCILIATION WORK OF THE DEPARTMENT

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Company or industry and location	Nature of controversy	Craft concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
McCrellish & Quigley Printing Co., Trenton, N. J.	Strike	Printers	Asked \$13 per week increase.	Unclassified. Wage agreement concluded before arrival of commissioner.	1927 Dec. 19	1927 Dec. 28	18	-----
Pennsylvania Coal Co., Pittston, Pa.	do	Miners	Objection to mechanical loading.	Adjusted. Returned; wages under discussion.	1928 Jan. 5	1928 Jan. 7	1,400	15
Terminal depot building, Cleveland, Ohio.	do	Electrical workers	Objection to use of company maintenance men.	Unclassified. Satisfactorily arranged in conference.	Jan. 7	Jan. 10	50	-----
East Pennsylvania Electric Railway Co., Pottsville to Mauch Chunk, Pa.	Controversy	Electric railway workers.	Renewal of agreement.	Pending. All proposals rejected at this time.	Jan. 1	-----	200	-----
National Plating & Enameling Co., Jackson, Mich.	Strike	Metal polishers	Price for piecework and discharge.	do	(¹)	-----	60	80
Evans Leather Co., Camden, N. J.	do	Leather workers	Asked union recognition.	Adjusted. Returned without change.	Jan. 16	Jan. 29	70	-----
Eden Manufacturing Co., Langhorne, Pa.	do	Weavers	Wages cut 10 per cent.	Pending. Open shop effective.	Jan. 1	-----	11	20
Kosher butchers, New York City.	do	Kosher butchers	Hours and conditions.	Unclassified. New agreement concluded before arrival of commissioner.	Jan. 7	Jan. 8	750	700
Loop Building Manufacturers' Association, Chicago, Ill.	Threatened strike.	Window washers	Wage conference asked for and refused by association.	Pending.	Jan. 18	-----	200	-----
Prominent Shirt Factory, St. Claire, Pa.	Lockout	Shirt makers	Discharge of certain employees.	Pending. Mediation not desired at present.	Jan. 15	-----	18	150
Sunderland Construction Co., Westport, Conn.	Strike	Carpenters	Asked \$1 increase per day and 5-day week.	Unclassified. Terms asked granted before arrival of commissioner.	Jan. 3	Jan. 9	6	-----
Penzelt Construction Co., Saugatuck, Conn.	do	do	do	do	do	do	15	-----
Consolidated Rabbit Skin Dressers, New York City.	Controversy	Rabbit-skin dressers	Wage cuts.	Pending.	Jan. 17	-----	(¹)	-----
Shoe workers, Haverhill, Mass.	Strike	Shoe workers	Alleged violation of peace agreement; wages.	Adjusted. Restored 1927 price list pending survey of conditions; re-active to Jan. 1, 1928.	Jan. 18	Jan. 30	5,500	5,000
Comer Lathing & Plastering Co., Kansas City, Mo.	Controversy	Lathers and plasterers	Jurisdiction and division of labor.	Adjusted. Equal division of labor arranged in conference.	do	Feb. 9	70	-----
Walker Laundry Co., Aurora, Ill.	do	Building crafts	Nonunion labor employed.	Pending.	Jan. 16	-----	25	-----
Painters, paper hangers, and decorators, Williamsport, Pa.	Threatened strike.	Painters, etc.	Violation of agreement.	do	Jan. 23	-----	176	-----

¹ Not reported.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, JANUARY, 1928—
Continued

Company or industry and location	Nature of controversy	Craft concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Cleveland Terminal Co., Cleveland Ohio.	Walkout.....	Engineers and truck drivers.	Objection to nonunion labor being employed on building.	Pending.....	1928 Jan. 21	1928.....	(1)	-----
United States Glove Co., Marion, Ind.	Strike.....	Glove makers.....	Wages and union recognition.	do.....	Jan. 28	-----	212	40
Paper mills, Middletown, Ohio.....	do.....	Stationary engineers and firemen.	Asked 20 cents increase per hour and 8-hour day.	Unable to adjust. Places of strikers filled by others.	Jan. 17	Jan. 31	27	600
Maidright Clothing Co., New York City.	do.....	Garment workers.....	Wage cut and violation of agreement.	Unable to adjust. Company going out of business.	Jan. 1	Feb. 1	12	-----
Memorial Building, Indianapolis, Ind.	Controversy.....	Plumbers and sheet-metal workers.	Jurisdiction of metal work....	Adjusted. Building Trades Council to fix terms.	Jan. 4	Jan. 24	50	250
Butler College, Indianapolis, Ind.	do.....	Ironworkers and steam fitters.	Jurisdiction of placing boiler.	do.....	do.....	do.....	20	600
Shortridge High School, Indianapolis, Ind.	do.....	Carpenters, sheet-metal workers, and ironworkers.	Jurisdiction of hollow-metal work.	do.....	do.....	do.....	150	200
Total.....							9,040	7,655

¹ Not reported.

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in Foundries and Machine Shops, 1927

A SUMMARY of the results of an extensive study made in the summer of 1927 by the Bureau in Labor Statistics of wages and hours of labor of wage earners in representative foundries and machine shops in the United States is here presented. The principal figures in the report are average full-time hours per week, average earnings per hour, and average full-time earnings per week, and cover 38,986 wage earners of 417 foundries and 86,771 wage earners of 526 machine shops in 28 States. The States not included in the report employ only 3 per cent of the total number of wage earners in these closely correlated industries according to the 1925 Census of Manufactures. Figures in much more detail will be published in a forthcoming bulletin of the bureau. Similar studies were made in 1923 and 1925.

The averages in Table 1 are for the total number of employees covered in the studies in each of the years 1923, 1925, and 1927, and are considered fully representative of the wages and hours in these industries in each of these years. The 1923 figures are drawn from Bulletin No. 362 and those for 1925 from Bulletin No. 422. The index numbers were computed from the averages with the 1923 average the base or 100 per cent.

As the table shows, average full-time hours for foundries decreased from 52.4 per week or an index of 100 in 1923 to 51.5 per week or an index of 98.3 in 1925 and to 51.1 per week or an index of 97.5 in 1927. Thus, hours decreased 2.5 per cent between 1923 and 1927. Average earnings per hour in all occupations combined, increased from 55.8 cents or an index of 100 in 1923 to 61 cents or an index of 109.3 in 1925, and to 62.4 cents or an index of 111.8 in 1927. Between 1923 and 1927 earnings per hour increased 11.8 per cent. Average full-time earnings per week increased from an index of 100 in 1923 to 107.5 in 1925 and to 109.1 in 1927. Between 1923 and 1927 full-time earnings per week increased 9.1 per cent. The increase in full-time earnings per week was less than the increase in average earnings per hour on account of the decrease in average full-time hours per week.

Full-time hours per week were a little lower in machine shops than in foundries. While earnings per hour in machine shops were almost the same each year as in foundries, the closeness is striking. In machine shops full-time hours per week decreased 1.4 per cent between 1923 and 1927, earnings per hour increased 11.8 per cent, and full-time earnings per week increased 10.2 per cent.

TABLE 1.—AVERAGE HOURS AND EARNINGS AND INDEX NUMBERS OF AVERAGE HOURS AND EARNINGS, ALL EMPLOYEES, 1923, 1925, AND 1927
[1923=100]

Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
						Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Foundries:								
1923.....	351	32,166	52.4	\$0.558	\$29.24	100.0	100.0	100.0
1925.....	413	40,393	51.5	.610	31.42	98.3	109.3	107.5
1927.....	417	38,986	51.1	.624	31.89	97.5	111.8	106.1
Machine shops:								
1923.....	429	58,914	50.8	.559	28.40	100.0	100.0	100.0
1925.....	511	86,274	50.4	.602	30.34	99.2	107.7	106.8
1927.....	526	86,771	50.1	.625	31.31	98.6	111.8	110.2

The study was made by the bureau through representatives who visited the foundries and machine shops. For practically all establishments included in the report the agents copied data covering individual hours and earnings directly from the pay rolls, time-clock cards, and other records for a representative pay period in 1927. A few establishments prepared their own material. A very large proportion of the establishments covered in 1927 were covered also in 1925 and 1923. Data were taken for only part of the total number of wage earners in a few very large establishments, as the inclusion of all of them would have tended to impair the representative averages for the States in which the establishments are located. A large per cent of these establishments pay employees every week. Data for those that pay every two weeks or half month were taken in such a manner as to make it possible to present figures for one week for all establishments. As approximately 90 per cent of the 1927 data were collected from pay rolls in the months from June to September the averages therefore are fairly representative of wage conditions in these months.

The averages in Table 2 are given separately for males and for females in each of the principal occupations in foundries and in machine shops in 1925 and 1927, for all males and for all females in all occupations, and also for both sexes combined or the industry as a whole.

Table 2 shows that average full-time hours per week of males in foundries, 1927, range from 49.9 for molders, hand, floor, to 52.6 for crane operators, and those of females from 48.4 for core makers to 50 for chippers and rough grinders. Average earnings per hour of males range from 48.4 cents for molders' helpers, floor, to 83 cents for pattern makers, and those of females from 31.6 cents for chippers and rough grinders to 49.5 cents for core makers. Average full-time earnings per week of males range from \$24.78 for molders' helpers, floor, to \$41.75 for pattern makers, and those of females from \$15.80 for chippers and rough grinders to \$23.96 for core makers.

The average full-time hours per week of males in all occupations combined in foundries decreased from 51.5 in 1925 to 51.1 in 1927. The average of the women employees remained at 49 per week in both 1925 and 1927. During the same period the average earnings per hour of males increased from 61.2 to 62.6 cents, and those of females from 42.7 to 46.2 cents. Full-time earnings per week of males increased from \$31.52 to \$31.99, and those of females from \$20.92 to \$22.64.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS,
1925 AND 1927, BY OCCUPATION AND SEX

Foundries

Occupation	Sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Chippers and rough grinders.....	Male.....	1925	383	4,110	51.5	\$0.521	\$26.83
	do.....	1927	379	3,857	51.1	.537	27.44
	Female.....	1927	1	8	50.0	.316	15.80
Core makers.....	Male.....	1925	393	3,067	50.3	.734	36.92
	do.....	1927	401	3,042	50.4	.755	38.05
	Female.....	1925	39	353	48.6	.444	21.58
	do.....	1927	41	324	48.4	.495	23.96
Crane operators.....	Male.....	1925	236	772	52.7	.562	29.62
	do.....	1927	243	875	52.6	.575	30.25
Cupola tenders.....	do.....	1925	380	567	51.9	.635	32.96
	do.....	1927	393	602	51.8	.620	32.12
Laborers.....	do.....	1925	389	10,931	52.5	.481	25.25
	do.....	1927	403	11,019	52.1	.492	25.63
	Female.....	1925	17	125	50.2	.382	19.18
Molders, hand, bench.....	Male.....	1925	325	2,363	50.2	.768	38.55
	do.....	1927	325	2,061	50.5	.789	39.84
Molders, hand, floor.....	do.....	1925	401	5,612	50.4	.802	40.42
	do.....	1927	402	5,376	49.9	.820	40.92
Molders, machine.....	do.....	1925	229	3,140	50.1	.733	36.72
	do.....	1927	220	3,133	50.4	.752	37.90
Molders' helpers, floor.....	do.....	1925	285	2,642	51.8	.460	23.83
	do.....	1927	247	1,820	51.2	.484	24.78
Pattern makers.....	do.....	1925	346	1,827	50.4	.804	40.52
	do.....	1927	259	1,512	50.3	.830	41.75
Rough carpenters.....	do.....	1925	293	634	51.1	.591	30.20
	do.....	1927	292	625	50.8	.609	30.94
Sand blasters ¹	do.....	1927	175	362	51.7	.591	30.55
Other employees.....	do.....	1925	378	4,250	52.7	.576	30.36
	do.....	1927	365	4,263	50.9	.587	29.88
	Female.....	1927	15	107	50.6	.380	19.23
All occupations.....	Male.....	1925	413	39,915	51.5	.612	31.52
	do.....	1927	417	38,547	51.1	.626	31.99
	Female.....	1925	39	478	49.0	.427	20.92
	do.....	1927	42	439	49.0	.462	22.64
	Male and female.....	1925	413	40,393	51.5	.610	31.42
	do.....	1927	417	38,986	51.1	.624	31.89

Machine shops

Assemblers.....	Male.....	1925	306	7,151	49.6	\$0.634	\$31.45
	do.....	1927	368	8,020	50.1	.653	32.72
	Female.....	1925	9	150	50.7	.444	22.51
	do.....	1927	14	120	49.5	.423	20.94
Bench hands and fitters.....	Male.....	1925	388	8,157	49.8	.643	32.02
	do.....	1927	332	6,661	49.5	.662	32.77
	Female.....	1925	14	146	49.3	.468	23.07
	do.....	1927	20	341	49.0	.411	20.14
Blacksmiths.....	Male.....	1925	395	885	50.2	.717	35.99
	do.....	1927	406	845	50.2	.726	36.45
Blacksmith's helpers.....	do.....	1925	298	857	50.5	.504	25.45
	do.....	1927	291	722	50.2	.525	26.36
Boring-mill hands and operators.....	do.....	1925	341	2,135	50.4	.688	34.68
	do.....	1927	355	2,208	50.7	.727	36.86
Buffers and polishers ¹	do.....	1927	109	580	49.4	.699	34.53
	Female.....	1927	3	6	49.0	.450	22.05
Crane operators.....	Male.....	1925	214	754	50.7	.524	26.57
	do.....	1927	218	865	51.2	.540	27.65
	Female.....	1927	2	4	51.3	.431	22.11
Drill-press hands and operators.....	Male.....	1925	423	5,012	50.4	.579	29.18
	do.....	1927	433	4,760	50.1	.605	30.31
	Female.....	1925	16	93	49.6	.477	23.37
	do.....	1927	22	121	49.4	.448	22.13
Grinding-machine hands and operators.....	Male.....	1925	267	2,016	50.3	.637	32.04
	do.....	1927	299	2,285	50.1	.668	33.33
	Female ¹	1927	5	15	48.6	.444	21.58
Laborers.....	Male.....	1925	439	9,833	50.6	.456	23.07
	do.....	1927	459	8,343	50.4	.456	22.98

¹Included with "Other employees" in 1925.

¹Included with "Other machine hands and operators" in 1925.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1925 AND 1927, BY OCCUPATION AND SEX—Continued

Machine shops—Continued

Occupation	Sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Lathe hands and operators, engine.....	Male.....	1925	401	5,856	50.3	\$0.663	\$33.35
	do.....	1927	415	5,964	50.7	.695	35.24
Lathe hands and operators, turret.....	Female.....	1927	2	7	48.4	.385	18.63
	Male.....	1925	328	3,393	50.2	.647	32.48
	do.....	1927	343	3,167	50.0	.675	33.75
	Female.....	1925	3	27	49.9	.488	24.35
Machinists.....	do.....	1927	8	46	50.0	.549	27.45
	Male.....	1925	374	3,820	49.9	.702	35.03
Machinists' and toolmakers' helpers.....	do.....	1927	395	3,795	49.3	.728	35.89
	do.....	1925	262	1,641	49.8	.494	24.60
Milling-machine hands and operators.....	do.....	1927	269	1,673	50.1	.515	25.80
	do.....	1925	339	2,925	49.7	.653	32.45
	do.....	1927	343	2,872	49.7	.685	34.04
	Female.....	1925	7	32	49.4	.497	24.55
Packers and craters.....	do.....	1927	3	17	48.8	.489	23.86
	Male.....	1925	274	1,488	50.5	.520	26.26
	do.....	1927	288	1,793	50.1	.537	26.90
	Female.....	1925	10	68	49.7	.354	17.59
Pattern makers.....	do.....	1927	7	44	49.5	.389	19.26
	Male.....	1927	236	1,228	49.6	.841	41.71
Planer hands and operators.....	do.....	1925	327	1,838	50.2	.705	35.39
	do.....	1927	339	1,817	50.5	.742	37.47
Screw-machine hands and operators.....	do.....	1925	215	1,482	49.8	.643	32.02
	do.....	1927	213	1,520	49.8	.664	33.07
Sheet-metal machine operators ¹	Female.....	1927	3	10	48.7	.435	21.18
	Male.....	1927	137	867	50.2	.603	30.27
Toolmakers.....	Female.....	1927	12	167	48.7	.420	20.45
	Male.....	1925	346	2,573	50.0	.727	36.35
Other machine hands and operators.....	do.....	1927	354	2,863	49.7	.756	37.57
	do.....	1925	371	4,066	50.5	.630	31.82
Other precision machine hands and operators. ²	Female.....	1925	16	201	48.8	.441	21.52
	Male.....	1927	316	1,997	50.5	.659	33.28
Other skilled employees.....	Female.....	1927	8	122	49.3	.330	16.27
	Male.....	1925	458	9,602	50.4	.647	32.61
	do.....	1927	468	11,114	50.1	.650	32.57
	Female.....	1925	13	215	48.9	.372	18.19
Other employees.....	do.....	1927	27	317	47.7	.401	19.13
	Male.....	1925	498	9,715	52.5	.514	26.99
	do.....	1927	487	9,342	50.4	.526	26.51
	Female ³	1925	23	143	49.2	.352	17.32
	do.....	1927	20	133	49.3	.309	15.23
All occupations.....	Male.....	1925	511	85,199	50.4	.604	30.44
	do.....	1927	526	85,301	50.1	.629	31.51
	Female.....	1925	36	1,075	49.3	.420	20.71
	do.....	1927	42	1,470	48.9	.403	19.71
	Male and female.....	1925	511	86,274	50.4	.602	30.34
	do.....	1927	526	86,771	50.1	.625	31.31

¹ Included with "Other machine hands and operators" in 1925.² Includes a few laborers.

Table 3 presents for each State data on average full-time hours per week, earnings per hour, and full-time earnings per week for four representative occupations each in foundries and machine shops. The figures in the table illustrate the variations in hours and wages from State to State.

From the table it is seen that the average full-time hours per week of laborers in foundries range from 45.3 to 54.3. Average earnings per hour in 4 States range from 25.6 cents to 33.3 cents, in 4 States from 35.3 to 39.3 cents, in 12 States from 43.8 to 49.7 cents, and in 8 States from 50.1 to 56 cents per hour. Full-time earnings per week in 6 States range from \$13.70 to \$18.21, in 8 States from \$20.23 to \$24.90, and in 14 States from \$25.23 to \$28.84.

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TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 8 SPECIFIED OCCUPATIONS IN
FOUNDRIES AND MACHINE SHOPS, 1927, BY OCCUPATION, SEX, AND STATE

Foundries

State	Laborers, male					Molders, hand, floor, male				
	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Alabama.....	4	67	54.0	\$0.306	\$16.52	4	53	54.1	\$0.714	\$38.63
California.....	20	258	48.2	.557	26.85	19	205	45.5	.960	43.68
Colorado.....	2	24	51.7	.438	22.64	3	49	45.5	.805	36.63
Connecticut.....	17	490	53.4	.478	25.53	16	244	49.4	.811	40.06
Georgia.....	7	165	53.5	.256	13.70	7	68	53.4	.720	38.45
Illinois.....	28	902	50.5	.549	27.72	28	361	47.3	.831	39.31
Indiana.....	15	839	51.5	.477	24.57	15	288	50.9	.709	36.09
Iowa.....	11	186	54.1	.473	25.59	11	130	52.4	.816	42.76
Kansas.....	6	28	53.7	.393	21.10	9	44	53.8	.623	33.52
Kentucky.....	4	23	47.5	.380	18.05	7	35	49.3	.657	32.39
Louisiana.....	4	34	51.6	.353	18.21	5	41	50.3	.703	35.36
Maine.....	3	39	53.0	.476	25.23	4	35	47.8	.667	31.88
Maryland.....	7	135	53.1	.381	20.23	7	96	50.2	.773	38.80
Massachusetts.....	28	695	50.7	.501	25.40	27	367	48.4	.971	47.00
Michigan.....	39	1,521	52.3	.529	27.67	33	418	51.1	.789	40.32
Minnesota.....	5	105	54.3	.491	26.66	4	45	52.4	.667	34.95
Missouri.....	13	145	51.8	.445	23.05	12	146	50.5	.817	41.26
New Hampshire.....	6	31	47.4	.466	22.09	8	49	49.1	.735	36.09
New Jersey.....	17	706	53.2	.468	24.90	16	262	50.4	.888	44.76
New York.....	25	741	52.0	.525	27.30	25	326	49.2	.832	40.93
Ohio.....	52	1,237	54.2	.475	25.75	51	832	50.7	.848	42.99
Oregon.....	7	53	45.3	.514	23.28	7	38	45.6	.865	39.44
Pennsylvania.....	40	1,602	51.3	.497	25.50	40	739	50.6	.817	41.34
Rhode Island.....	8	193	52.2	.487	25.42	8	106	50.7	.759	38.48
Tennessee.....	7	87	50.0	.296	14.80	7	87	49.4	.696	34.38
Texas.....	9	196	51.4	.333	17.12	10	69	50.3	.732	36.82
Washington.....	6	55	47.1	.560	26.38	7	67	46.9	.843	39.54
Wisconsin.....	13	462	53.5	.539	28.84	12	176	49.9	.810	40.42
Total.....	403	11,019	52.1	.492	25.63	402	5,376	49.9	.820	40.92
State	Molders, machine, male					Pattern makers, male				
	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Alabama.....						3	17	54.0	\$0.785	\$42.39
California.....	6	16	49.7	\$0.955	\$47.46	11	33	45.7	1.003	45.84
Colorado.....	2	4	45.0	.638	28.71	2	4	44.0	.899	39.56
Connecticut.....	8	111	54.5	.648	35.32	4	18	55.6	.651	36.20
Georgia.....	2	17	54.1	.706	38.19	4	15	57.6	.669	38.53
Illinois.....	13	217	50.5	.787	39.74	12	139	48.8	.891	43.48
Indiana.....	12	336	50.1	.724	36.27	10	89	50.1	.932	46.69
Iowa.....	7	98	49.8	.691	34.41	8	17	51.6	.685	35.35
Kansas.....	2	6	54.0	.584	31.54	8	11	52.9	.722	38.19
Kentucky.....	3	12	44.6	.569	25.38	1	3	(2)	(2)	(2)
Louisiana.....	(1)	(1)	(1)	(1)	(1)	2	8	49.3	.759	37.42
Maine.....	(1)	(1)	(1)	(1)	(1)	3	14	47.9	.629	30.13
Maryland.....	4	29	53.6	.639	34.25	7	20	48.9	.741	36.23
Massachusetts.....	23	325	48.5	.836	40.55	22	154	48.8	.752	36.70
Michigan.....	21	457	51.0	.730	37.23	29	139	51.4	.846	43.48
Minnesota.....	3	25	53.1	.666	35.36	5	25	49.7	.730	36.28
Missouri.....	3	28	54.0	.657	35.48	7	35	46.5	1.070	49.76
New Hampshire.....	2	19	49.9	.793	39.57	2	8	50.0	.773	38.65
New Jersey.....	15	220	52.5	.757	39.74	13	137	50.1	.862	43.19
New York.....	17	312	47.5	.787	37.38	20	115	50.0	.815	40.75
Ohio.....	25	247	50.1	.765	38.33	30	178	51.0	.836	42.64
Oregon.....						2	8	46.5	.912	42.41
Pennsylvania.....	20	214	49.7	.700	34.79	30	161	51.0	.836	42.64
Rhode Island.....	7	101	51.8	.772	39.99	3	11	51.0	.662	33.76
Tennessee.....	2	7	49.4	.444	21.93	5	13	49.5	.876	43.36
Texas.....	3	19	50.2	.708	35.54	4	6	51.3	.713	36.58
Washington.....	(1)	(1)	(1)	(1)	(1)	2	7	45.1	.902	40.68
Wisconsin.....	11	288	51.3	.772	39.60	10	132	52.3	.780	40.79
Other States.....	3	25	52.8	.779	41.13					
Total.....	220	3,133	50.4	.752	37.90	259	1,512	50.3	.830	41.75

¹ Included under "Other States."

² Included in total.

TABLE 3.—AVERAGE HOURS AND EARNINGS FOR 8 SPECIFIED OCCUPATIONS IN
FOUNDRIES AND MACHINE SHOPS, 1927, BY OCCUPATION, SEX, AND STATE—Con.*Machine shops*

State	Bench hands and fitters, male					Laborers, male				
	Num- ber of estab- lish- ments	Num- ber of em- ployees	Aver- age full- time hours per week	Aver- age earn- ings per hour	Aver- age full- time weekly earn- ings	Num- ber of estab- lish- ments	Num- ber of em- ployees	Aver- age full- time hours per week	Aver- age earn- ings per hour	Aver- age full- time weekly earn- ings
Alabama.....	2	12	54.6	\$0.593	\$32.38	6	53	54.5	\$0.304	\$16.57
California.....	17	197	45.3	.796	36.06	21	194	45.9	.535	24.56
Connecticut.....	11	277	50.9	.651	33.14	16	202	50.8	.471	23.93
Georgia.....	2	19	59.7	.267	15.94	8	71	53.5	.226	12.09
Illinois.....	24	562	49.3	.721	35.55	32	1,009	49.9	.498	24.83
Indiana.....	10	131	48.8	.638	31.13	15	319	51.2	.437	22.37
Iowa.....	4	38	52.9	.422	22.32	9	75	53.5	.395	21.13
Kansas.....	4	12	54.2	.496	26.88	5	26	53.6	.362	19.40
Kentucky.....	5	29	47.5	.580	27.55	5	25	46.1	.406	18.72
Louisiana.....						4	40	54.9	.329	18.06
Maine.....	2	63	44.8	.502	22.49	4	33	48.4	.419	20.28
Maryland.....	1	4	(1)	(1)	(1)	6	58	49.6	.430	21.33
Massachusetts.....	35	1,100	47.4	.660	31.28	36	841	49.7	.459	22.81
Michigan.....	25	489	50.7	.651	33.01	32	672	51.3	.490	25.14
Minnesota.....	5	12	49.5	.668	33.07	5	103	49.8	.447	22.26
Missouri.....	10	64	53.3	.545	29.05	16	158	52.2	.409	21.35
New Hampshire.....	5	72	48.2	.723	34.85	8	43	50.3	.469	23.59
New Jersey.....	25	378	49.3	.641	31.60	29	373	49.8	.471	23.46
New York.....	20	922	48.4	.716	34.65	23	872	48.6	.460	22.36
Ohio.....	62	856	50.0	.650	32.50	80	1,225	50.6	.453	22.92
Oregon.....	3	8	44.5	.708	31.51	3	21	46.2	.490	22.64
Pennsylvania.....	33	952	51.7	.633	32.73	44	1,182	51.6	.444	22.91
Rhode Island.....	6	114	50.4	.595	29.99	12	121	51.0	.443	22.59
Tennessee.....	3	20	49.0	.511	25.04	8	81	49.3	.316	15.58
Texas.....	2	6	53.0	.522	27.67	12	157	50.4	.349	17.59
Washington.....	3	31	47.5	.775	36.81	6	38	47.5	.485	23.04
Wisconsin.....	13	293	52.6	.635	33.40	14	351	52.3	.471	24.63
Total.....	332	6,661	49.5	.662	32.77	459	8,343	50.4	.456	22.96
State	Lathe hands and operators, engine, male					Toolmakers, male				
	Num- ber of estab- lish- ments	Num- ber of em- ployees	Aver- age full- time hours per week	Aver- age earn- ings per hour	Aver- age full- time weekly earn- ings	Num- ber of estab- lish- ments	Num- ber of em- ployees	Aver- age full- time hours per week	Aver- age earn- ings per hour	Aver- age full- time weekly earn- ings
Alabama.....	2	22	54.6	\$0.668	\$36.47	2	8	54.9	\$0.746	\$40.96
California.....	16	219	45.5	.848	38.58	15	56	46.0	.867	39.88
Connecticut.....	19	232	51.1	.678	34.65	18	115	50.4	.735	37.04
Georgia.....	4	17	53.7	.547	29.37	4	6	53.3	.717	38.22
Illinois.....	33	865	49.9	.767	38.27	24	300	50.2	.818	41.06
Indiana.....	10	183	49.7	.643	31.96	13	77	50.5	.703	35.30
Iowa.....	7	48	52.4	.585	30.65	3	11	51.7	.642	33.19
Kansas.....	7	40	50.3	.659	33.15	2	2	52.0	.642	33.38
Kentucky.....	7	46	47.7	.612	29.19	6	12	46.6	.706	32.90
Louisiana.....	3	19	56.7	.630	35.72	1	1	(1)	(1)	(1)
Maine.....	3	56	47.4	.604	28.63	4	16	48.1	.614	29.53
Maryland.....	4	31	48.3	.586	28.30	4	42	48.0	.701	33.65
Massachusetts.....	36	648	49.2	.638	31.39	35	283	48.8	.723	35.28
Michigan.....	21	278	51.5	.643	33.11	24	202	50.8	.809	41.10
Minnesota.....	5	53	51.4	.647	33.26	3	11	50.5	.668	33.73
Missouri.....	16	159	51.0	.657	33.51	12	27	50.4	.744	37.50
New Hampshire.....	6	54	50.6	.641	32.43	5	20	49.2	.805	39.61
New Jersey.....	26	252	49.5	.723	35.79	17	85	49.3	.789	38.90
New York.....	22	438	49.2	.724	35.62	20	407	48.2	.818	39.43
Ohio.....	81	1,014	53.5	.694	37.13	64	607	49.4	.726	35.86
Oregon.....	5	26	45.4	.772	35.05	2	3	44.0	.876	38.54
Pennsylvania.....	44	727	51.4	.687	35.31	38	276	51.2	.722	36.97
Rhode Island.....	11	125	50.4	.607	30.59	11	109	50.4	.708	35.68
Tennessee.....	3	40	48.8	.608	29.67	3	9	49.1	.723	35.50
Texas.....	6	66	49.3	.679	33.47	6	13	49.4	.712	35.17
Washington.....	4	40	47.1	.779	36.69	4	6	47.2	.837	39.51
Wisconsin.....	14	266	53.5	.695	37.18	14	159	52.5	.702	36.86
Total.....	415	5,964	50.7	.695	35.24	354	2,863	49.7	.756	37.57

1 Data included in total.

Table 4 presents for all wage earners of each sex in each State, in foundries and in machine shops, the number of establishments and wage earners covered in the 1927 study, average full-time hours per week, average earnings per hour and average full-time earnings per week.

It is seen that the average full-time hours in foundries for males range in 10 States from 45.3 to 49.6 per week and in 18 States from 50.4 to 54.5 per week. Those for females in 8 States range from 45.6 to 49.2 and in 3 States from 50 to 51.6 hours. Earnings per hour for males in 6 States range from 39.1 cents to 48.1 cents, in 7 States from 50 to 59.6 cents, and in 14 States from 61.1 to 69.3 cents. The average in 1 State is 74 cents per hour. The averages for females in 8 States range from 40.5 to 47.4 cents per hour and in 3 States from 50.1 cents to 55.8 cents per hour. Full-time earnings per week for males range in 6 States from \$21.31 to \$24.51, in 6 States from \$25.55 to \$29.98, and in 16 States from \$30.90 to \$34.71. The averages for females range in 10 States from \$19.89 to \$24.25, while in 1 State the average is \$27.23.

TABLE 4.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927, BY SEX AND STATE

Males

State	Foundries					Machine shops				
	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Alabama.....	4	265	54.1	\$0.453	\$24.51	6	365	54.2	\$0.543	\$29.43
California.....	21	1,065	46.9	.740	34.71	27	2,234	46.0	.746	34.32
Colorado.....	3	266	47.9	.577	27.64					
Connecticut.....	16	1,537	52.2	.592	30.90	19	3,416	50.9	.639	32.53
Georgia.....	7	492	54.5	.391	21.31	8	336	54.3	.433	23.51
Illinois.....	28	2,835	49.5	.669	33.12	38	10,086	49.7	.685	34.04
Indiana.....	16	2,419	50.9	.589	29.98	16	2,944	50.9	.566	28.81
Iowa.....	11	786	53.0	.615	32.60	9	773	52.8	.515	27.19
Kansas.....	9	228	53.9	.474	25.55	10	309	51.1	.518	26.47
Kentucky.....	7	159	48.8	.500	24.40	9	407	47.3	.554	26.20
Louisiana.....	5	219	49.6	.481	23.86	6	255	51.4	.484	24.88
Maine.....	4	182	50.8	.589	29.92	4	466	47.8	.555	26.53
Maryland.....	8	486	52.1	.554	28.86	8	725	46.8	.605	28.31
Massachusetts.....	28	3,141	49.6	.677	33.58	40	7,697	49.0	.611	29.94
Michigan.....	39	4,394	51.6	.640	33.02	36	5,626	51.2	.627	32.10
Minnesota.....	5	439	53.2	.596	31.71	6	656	50.1	.593	29.71
Missouri.....	12	667	51.4	.629	32.33	21	1,343	51.3	.576	29.55
New Hampshire.....	8	195	49.6	.635	31.50	9	657	50.2	.638	32.03
New Jersey.....	17	2,380	52.0	.627	32.60	31	4,017	49.5	.647	32.03
New York.....	25	2,751	50.4	.657	33.11	26	8,741	48.5	.662	32.11
Ohio.....	52	4,550	52.3	.630	32.95	89	13,980	50.5	.619	31.26
Oregon.....	7	224	45.3	.659	29.85	6	313	45.0	.705	31.73
Pennsylvania.....	40	5,086	51.1	.625	31.94	45	11,977	51.2	.622	31.85
Rhode Island.....	8	732	51.5	.611	31.47	13	1,851	50.4	.594	29.94
Tennessee.....	7	419	49.5	.470	23.27	8	458	49.2	.540	26.57
Texas.....	10	439	51.2	.470	24.06	14	853	49.8	.531	26.44
Washington.....	7	271	46.9	.693	32.50	7	481	47.2	.714	33.70
Wisconsin.....	13	1,920	52.2	.637	33.25	15	4,335	52.6	.602	31.67
Total.....	417	38,547	51.1	.626	31.90	526	85,301	50.1	.629	31.51

TABLE 4.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927, BY SEX AND STATE—Continued.

Females

State	Foundries					Machine shops				
	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Connecticut.....						(1)	(1)	(1)	(1)	(1)
Illinois.....	4	60	48.8	\$0.558	\$27.23	2	47	51.6	\$0.391	\$20.18
Indiana.....	2	59	50.0	.416	20.80	(1)	(1)	(1)	(1)	(1)
Iowa.....	(1)	(1)	(1)	(1)	(1)					
Kentucky.....	2	5	47.0	.446	20.96	(1)	(1)	(1)	(1)	(1)
Maine.....						(1)	(1)	(1)	(1)	(1)
Massachusetts.....	2	7	48.0	.474	22.75	8	84	47.9	.434	20.79
Michigan.....	8	84	51.6	.434	22.39	16	345	50.2	.467	23.44
Minnesota.....	(1)	(1)	(1)	(1)	(1)					
New Hampshire.....						(1)	(1)	(1)	(1)	(1)
New Jersey.....	4	57	49.2	.451	22.19	2	81	50.0	.377	18.85
New York.....	7	63	45.6	.501	22.85	3	277	48.1	.389	18.71
Ohio.....	2	23	49.0	.406	19.89	6	287	49.3	.345	17.01
Pennsylvania.....	3	33	48.7	.419	20.41	5	192	48.1	.398	19.14
Rhode Island.....	2	10	50.6	.405	20.49	2	67	43.0	.445	19.14
Wisconsin.....	4	31	46.9	.517	24.25	(1)	(1)	(1)	(1)	(1)
Other States.....	2	7	51.4	.315	16.19	6	90	49.5	.370	18.32
Total.....	42	439	49.0	.462	22.64	50	8,112	48.9	.403	19.71

Males and females

Alabama.....	4	265	54.1	\$0.453	\$24.51	6	365	54.2	\$0.543	\$29.43
California.....	21	1,065	46.9	.740	34.71	27	2,234	46.0	.746	34.32
Colorado.....	3	266	47.9	.577	27.64					
Connecticut.....	16	1,537	52.2	.592	30.90	19	3,419	50.9	.639	32.53
Georgia.....	7	492	54.5	.391	21.31	8	336	54.3	.433	23.51
Illinois.....	28	2,895	49.5	.667	33.02	38	10,133	49.7	.684	33.99
Indiana.....	16	2,478	50.9	.586	29.83	16	2,976	50.8	.564	28.65
Iowa.....	11	789	53.0	.614	32.54	9	773	52.8	.515	27.19
Kansas.....	9	228	53.9	.474	25.55	10	309	51.1	.518	26.47
Kentucky.....	7	164	48.8	.498	24.30	9	429	47.4	.540	25.60
Louisiana.....	5	219	49.6	.481	23.86	6	255	51.4	.566	29.09
Maine.....	4	182	50.8	.589	29.92	4	467	47.8	.554	26.48
Maryland.....	8	486	52.1	.554	28.86	8	725	46.8	.605	28.31
Massachusetts.....	28	3,148	49.6	.677	33.58	40	7,781	48.9	.609	29.78
Michigan.....	39	4,478	51.6	.636	32.82	36	5,971	51.2	.619	31.69
Minnesota.....	5	443	53.1	.594	31.54	6	656	50.1	.593	29.71
Missouri.....	12	667	51.4	.629	32.33	21	1,343	51.3	.576	29.55
New Hampshire.....	8	195	49.6	.635	31.50	9	685	50.2	.629	31.58
New Jersey.....	17	2,437	51.9	.623	32.33	31	4,098	49.5	.642	31.78
New York.....	25	2,814	50.3	.654	32.90	26	9,018	48.5	.654	31.72
Ohio.....	52	4,573	52.2	.629	32.83	89	14,267	50.5	.614	31.01
Oregon.....	7	224	45.3	.659	29.85	6	313	45.0	.705	31.73
Pennsylvania.....	40	5,119	51.1	.624	31.89	45	12,169	51.1	.619	31.63
Rhode Island.....	8	742	51.5	.608	31.31	13	1,918	50.2	.590	29.62
Tennessee.....	7	419	49.5	.470	23.27	8	458	49.2	.540	26.57
Texas.....	10	439	51.2	.470	24.06	14	853	49.8	.531	26.44
Washington.....	7	271	46.9	.693	32.50	7	481	47.2	.714	33.70
Wisconsin.....	13	1,951	52.2	.635	33.15	15	4,339	52.6	.602	31.67
Total.....	417	38,986	51.1	.624	31.89	526	86,771	50.1	.625	31.31

1 Included in "Other States."

Wages of Civil Employees Under the United States Naval Establishment, 1928¹

THE Navy Department has just published its schedule of wages for civil employees under the Naval Establishment, which went into effect January 1 to continue during the calendar year 1928. The following tables covering wages in the clothing workers' service and the laborer, helper, and mechanical service have been selected from the schedule as being of the most general interest. The figures for all occupations, other than apprentices, are maximum rates. The minimum rate is 10 cents under the maximum, and there is an intermediate rate 5 cents under the maximum.

For the majority of the laborers, helpers, and mechanics the new rates are higher than those of 1927, the increase in most cases being 1 cent per hour, although ranging as high as 8 cents per hour in the case of joiners at New Orleans. Only one decrease occurred.

In the clothing workers' service there were three increases and no decreases.

The detailed 1927 rates were given in the Labor Review for April, 1927 (pp. 79-82).

TABLE 1.—RATES OF WAGES PER HOUR IN THE CLOTHING WORKERS' SERVICE

Naval Supply Depot, Brooklyn, N. Y.

Occupation	Rate per hour	Occupation	Rate per hour
Assistant custom cutter.....	\$0. 85	Embroiderer.....	\$0. 50
Baster.....	. 85	Finish presser.....	. 95
Bushelman.....	. 80	Fitter.....	. 85
Canvas maker.....	. 65	General tailor.....	. 85
Chopper.....	. 75	Head custom cutter.....	1. 35
Cleaner.....	. 45	Hand buttonhole maker.....	. 80
Cloth sponger.....	. 75	Operator (female).....	. 50
Clothing examiner.....	. 75	Operator, sewing machine.....	. 67
Coat finisher.....	. 55	Operator, special machine.....	1. 00
Coat maker.....	. 90	Pocket maker.....	1. 00
Coat operator.....	1. 00	Spreader.....	. 67
Collar maker.....	. 90	Trimmer.....	. 60
Custom cutter.....	1. 25	Trouser finisher.....	. 55
Cutting-machine operator.....	. 90	Trouser maker.....	. 80
Cutter and marker.....	. 85	Trouser operator.....	. 90
Die-machine operator.....	. 75	Underpresser.....	. 80
Double-needle operator.....	. 70	Vest maker.....	. 75
Dress-coat maker.....	. 95		

Depot of Supplies, United States Marine Corps, Philadelphia, Pa.

Coat fitter.....	\$0. 83	Examiner, clothing.....	\$0. 73
Coat maker.....	. 90	Finisher.....	. 45
Coat operator.....	. 98	Operator (female).....	. 51
Custom cutter.....	1. 28	Presser.....	. 73
Cutter.....	. 83	Sponger.....	. 51
Cutter and marker.....	. 83	Tailor, first class.....	. 83
Cutting-machine operator.....	. 90	Tailor, second class.....	. 73
Embroideress.....	. 48	Trimmer.....	. 45

¹ United States. Navy Department. Schedule of wages for civil employees under the Naval Establishment for the calendar year 1928. Washington, 1928.

TABLE 2.—RATES OF WAGES PER HOUR IN THE LABORER, HELPER, AND MECHANICAL SERVICE

Occupation	Boston	New York	Philadelphia	Washington	Norfolk	Charleston	New Orleans	Mare Island	Puget Sound	Great Lakes
<i>Group I</i>										
Laborer, common	\$0.56	\$0.56	\$0.53	\$0.53	\$0.46	\$0.36	\$0.35	\$0.56	\$0.56	\$0.57
<i>Group II</i>										
Hammer runner:										
Heavy	.66	.66	.63	.63	.57	.57				
Others	.60	.62	.58	.58	.52	.52				
Helper:										
Blacksmith—										
Heavy fires	.64	.64	.62	.62	.59	.56		.65	.65	
Other fires	.61	.61	.57	.57	.54	.51		.61	.61	
Boilermaker	.61	.61	.57	.57	.54	.51		.61	.61	
Coppersmith	.61	.61	.57	.57	.54	.51		.61	.61	
Electrician	.63	.63	.59	.59	.56	.51		.63	.63	.61
Flange turner	.64	.64	.62		.59	.56		.65	.65	
Forger, heavy	.64	.64	.62		.59	.56		.65	.65	
General	.61	.61	.57	.57	.54	.51	.51	.61	.61	.59
Machinist	.61	.61	.57	.57	.54	.51	.51	.61	.61	.59
Molder	.61	.61	.57	.57	.56	.51		.61	.61	
Pipe fitter	.63	.63	.59	.59	.54	.51	.51	.63	.63	.61
Sheet-metal worker	.61	.61	.57	.57	.54	.51		.61	.61	
Ship fitter	.61	.61	.57		.54	.51		.61	.61	
Woodworker	.63	.63	.59	.59	.57	.51		.63	.63	
Hod carrier		.64		.62	.56	.56				
Holder-on	.65	.65	.65		.62	.59		.66	.66	
Laborer, classified	.56	.56	.53	1.53	.46	.36	.35	.56		.57
Oiler	.74	.75	.68	.68	.68	.66			.70	
Rivet heater	.58	.58	.56		.45	.35		.58	.58	
Sand blaster	.72	.72	.72	.72	.67	.67		.72	.72	
Stable keeper	.58	.58	.56	.56					.58	
Stevedore	.67	.68	.65		.53	.53		.71	.71	
Teamster	.58	.62	.56	.56	.48			.62	.62	.62
<i>Group III</i>										
Angle smith:										
Heavy fires	.95	.99	.93		.93	.89		1.01	1.01	
Other fires	.85	.89	.83		.83	.79		.91	.91	
Blacksmith:										
Heavy fires	.95	.99	.93	.93	.93	.89		1.01	1.01	
Other fires	.85	.89	.83	.83	.83	.79		.91	.91	
Boat builder	.89	.92	.87		.87			.97	.97	
Boiler maker	.86	.90	.85	.85	.85	.82		.91	.91	.87
Box maker	.62	.65	.60	.60	.58	.58		.65	.65	.63
Brakeman	.76	.76	.76	.76	.76	.76		.81	.81	
Buffer and polisher	.83	.83	.83	.83	.83			.89	.89	
Butcher			.73							
Calker, wood	.84	.89	.84	.84	.84	.80	.80	.92	.92	
Calker and chipper, iron	.86	.89	.84		.84	.82	.80	.91	.91	
Cement finisher	.92	.95	.90	.90	.88	.88	.84	.98	.98	.93
Cement worker	.63	.63	.61	.61	.51	.41		.61	.61	
Chauffeur	.67	.71	.64	.64	.61	.56	.58	.74	.74	.66
Conductor, railroad		.82	.82	.82	.82			.84	.84	
Cooper	.74	.75						.78	.78	
Coppersmith	.92	.97	.92	.92	.92	.85	.84	.95	.95	
Craneman, electric (under 20 tons)	.72	.75	.70	.70	.75	.68		.78	.78	
Cupola tender	.77	.80	.75	.75	.75			.83	.83	
Die sinker	.96	1.01	.96	.96	.96			1.01	1.01	
Diver	1.86	1.86	1.86		1.86	1.86	1.86	1.86	1.86	
Driller	.72	.75	.68		.68	.66		.78	.78	
Electrician	.94	.97	.92	.92	.92	.87	.87	.99	.99	.95
Electroplater	.88	.93	.86	.86	.86			.96	.96	
Engineman	.87	.91	.84	.84	.84	.81	.80	.93	.93	.88
Locomotive	.87	.91	.84	.84	.84	.81			.93	
Hoisting and portable	.87	.91	.84	.84	.84				.93	
Steam shovel		1.05	.98	.98	.98			1.06	1.06	
Fireman	.71	.74	.69	.69	.69	.66	.65	.77	.77	.74
Flange turner	.88	.93	.86	.86	.86	.86		.93	.93	
Forger:										
Drop	.83	.91	.81	.81	.81			.88	.88	
Heavy	1.33	1.36	1.31	1.31	1.31			1.38	1.38	
Foundry chipper	.64	.70	.64	.64	.64			.65	.65	
Frame bender	.88	.93	.86		.86	.85		.93	.93	
Furnace man:										
Foundry		.70	.65	.65	.65	.60		.74	.74	
Heater		.70	.65	.64	.64	.60		.68	.68	
Heavy forge, heater		.73	.80	.75	.72	.70		.75	.75	
Other forge		.63	.70	.65	.64	.60		.68	.68	

¹ Rate at Naval Powder Factory, Indianhead, Md., and Naval Proving Ground, Dahlgren, Va., \$0.50 per hour.

TABLE 2.—RATES OF WAGES PER HOUR IN THE LABORER, HELPER, AND MECHANICAL SERVICE—Continued

Occupation	Boston	New York	Philadelphia	Washington	Norfolk	Charleston	New Orleans	Mare Island	Puget Sound	Great Lakes
<i>Group III—continued</i>										
Galvanizer	\$0.71	\$0.72	\$0.67		\$0.67	\$0.64		\$0.79	\$0.79	
Gardener	.63	.63	.63	\$0.63	.63	.63	\$0.63	.73	.73	\$0.63
Instrument maker	.91	.94	.89	.89				.96	.96	
Joiner	.89	.92	.87	.87	.87	.85	.85	.97	.97	.92
Ladle man, foundry	.62	.70	.65	.67	.58				.68	
Lead burner	1.07	1.07	1.07	1.07	1.07	1.07		1.10	1.10	
Leather worker	.72	.75	.70		.68				.78	
Letterer and grainer	.94	.97	.92	.92	.92			1.00	1.00	
Loftman	.93	.95	.93		.93			.96	.96	
Machine operator	.68	.71	.67	.67	.67			.76	.76	
Machinist	.86	.91	.86	.86	.86	.80	.80	.92	.92	.90
Mason, brick or stone	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.17	1.17	1.14
Melter	.77	.82	.77	.77	.77				.83	
Electric		1.05	1.05		1.05				1.05	
Open hearth				1.10						
Millman	.89	.92	.87	.87	.87	.87		.97	.97	
Molder	.94	1.01	.96	.96	.96	.90		1.01	1.01	
Ordinance man	.75	.75	.75	.75	.75	.75		.80	.80	
Packer	.65	.68	.65	.65	.65	.65		.75	.75	.72
Painter	.89	.92	.87	.87	.87	.81	.81	.95	.95	.90
Pattern maker	.97	1.05	1.02	1.02	1.02	.92		1.10	1.10	
Pipe coverer and insulator	.87	.90	.87	.87	.87	.85		.91	.91	
Pipe fitter	.94	.97	.92	.92	.92	.88	.87	.99	.99	.94
Plasterer	1.14	1.14	1.14	1.14	1.14	1.14		1.17	1.17	1.12
Plumber	.94	.97	.92	.92	.92	.88	.87	.99	.99	.94
Printer, job	.89	.92	.87	.87	.87	.85		.95	.95	
Puncher and shearer	.64	.73	.62		.62	.60		.70	.70	
Rigger	.89	.92	.84	.84	.84	.81	.78	.93	.93	.85
Riveter	.87	.90	.85		.83	.80		.90	.90	
Rodman	.61	.61	.61	.61	.61	.61		.61	.61	
Sailmaker	.86	.89	.84	.84	.84	.84		.92	.92	
Saw filer	.97	1.04	.95	.95	.95	.95		1.00	1.00	
Sewer	.57	.57	.55	.55				.55		.50
Sheet-metal worker	.94	.97	.92	.92	.92	.88		.99	.99	.94
Ship fitter	.86	.90	.85	.85	.85	.82		.91	.91	
Shipwright	.89	.92	.87	.87	.87	.85		.97	.97	
Tile and plate setter	.87	.90				.83			.90	
Toolmaker	.91	.96	.91	.91	.91	.87		.97	.97	
Trackman	.63	.63	.61	.61	.56	.56		.63	.63	.63
Upholsterer	.89	.92	.87	.87				.95	.95	
Water tender	.75	.78	.73	.73	.73	.70		.80	.80	
Welder:										
Electric	.88	.91	.86	.86	.86	.83	.83	.92	.92	
Gas	.86	.87	.84	.84	.84	.80	.80	.89	.89	
Wharf builder	.89	.92	.87	.87	.87	.85		.97	.97	
<i>Group IVb</i>										
Apprentice:										
First class	.60	.60	.60	.60	.60	.60		.60	.60	
Second class	.48	.48	.48	.48	.48	.48		.48	.48	
Third class	.35	.35	.35	.35	.35	.35		.35	.35	
Fourth class	.25	.25	.25	.25	.25	.25		.25	.25	

Salary Adjustments of Municipal Employees in St. Paul Based On Cost of Living

THE principle of the periodic adjustment of salaries of civil service employees in the city of St. Paul¹ according to changes in the cost of living was first put into effect in 1918 in response to a demand from a group of employees for an increase in wages to meet the advancing living costs. The civil service bureau of the city had prepared a standardization of positions and salaries in 1917, which was accordingly put into effect in February, 1918, and remained in effect until August, 1919. In November, 1920, the present adjust-

¹ St. Paul, Minn. Civil Service Bureau. Standardizing salaries, by J. B. Probst. St. Paul, 1922.

able standardization was adopted in six of the city departments, and in October, 1922, it was extended to all city employees with the exception of teachers. Under this plan the employees were grouped in 15 basic minimum salary grades, which have since been increased to 27 standard rates, and these are used as the basis for the wage adjustments. In computing the increases in the cost of living, the cost-of-living figures published periodically by the United States Bureau of Labor Statistics are used. The basic salary rates, which are considered to be adequate standard salary rates for living conditions such as prevailed in the year 1916, are adjusted each year, therefore, on the basis of living costs and in addition an allowance of 5 per cent for seniority is computed on the basic salary rates.

A letter from the chief examiner of the city civil service dated December 27, 1927, giving the summary of the council salary ordinance as revised to January 1, 1928, states that for the first time since the adoption of the adjustable salary standardization the annual revision has been downward.

The following table gives a summary of the council salary ordinance, showing the basic entrance rates, the adjusting percentages, and the adjusted entrance rates for the different grades for the year 1928:

BASIC ENTRANCE SALARIES, PERCENTAGE OF INCREASE, AND ADJUSTED ENTRANCE RATE OF MUNICIPAL EMPLOYEES IN ST. PAUL, FOR THE YEAR 1928

(1) Standard rate No.	(2) Basic entrance salary (1916)	(3) Percentage increase to offset cost-of-living increase since 1916	(4) Adjusted entrance rate until Dec. 31, 1928	(5) Equivalent of 5 per cent seniority increases.	(6) Equivalent entrance rate per day ¹	(7) Equivalent entrance rate per hour ¹
1.....	\$32.50	50	\$48.75	\$5.00	\$2.06	\$0.25 $\frac{1}{4}$
2.....	40.00	50	60.00	5.00	2.54	.31 $\frac{1}{4}$
3.....	45.00	50	67.50	5.00	2.86	.35 $\frac{3}{4}$
4.....	50.00	50	75.00	5.00	3.17	.39 $\frac{1}{4}$
5.....	55.00	50	82.50	5.00	3.49	.43 $\frac{1}{4}$
6.....	60.00	50	90.00	5.00	3.81	.47 $\frac{1}{4}$
7.....	65.00	50	97.50	5.00	4.13	.51 $\frac{1}{4}$
8.....	70.00	50	105.00	5.00	4.44	.55 $\frac{1}{4}$
9.....	75.00	50	112.50	5.00	4.76	.59 $\frac{1}{4}$
10.....	80.00	50	120.00	5.00	5.08	.63 $\frac{1}{4}$
11.....	85.00	48	125.80	5.00	5.32	.66 $\frac{1}{4}$
12.....	90.00	46	131.40	5.00	5.56	.69 $\frac{1}{4}$
13.....	95.00	44	136.80	5.00	5.79	.72 $\frac{3}{4}$
14.....	100.00	42	142.00	5.00	6.01	.75
15.....	105.00	42	149.10	5.25	6.31	.78 $\frac{3}{4}$
16.....	110.00	40	154.00	5.50	6.52	.81 $\frac{1}{4}$
17.....	115.00	38	158.70	5.75	6.72	.84
18.....	125.00	38	172.50	6.25	7.30	.91 $\frac{1}{4}$
19.....	135.00	36	183.60	6.75	7.77	.97
20.....	150.00	33	199.50	7.50	8.44	1.05 $\frac{1}{4}$
21.....	175.00	29	225.75	8.75	-----	-----
22.....	185.00	27	234.95	9.25	-----	-----
23.....	200.00	25	250.00	10.00	-----	-----
24.....	225.00	21	272.25	11.25	-----	-----
25.....	250.00	17	292.50	12.50	-----	-----
26.....	300.00	8	324.00	15.00	-----	-----
27 ²	375.00	-----	-----	-----	-----	-----

¹The rates in columns 6 and 7 are the equivalent rates as compared with the respective monthly rates specified in column 4. The daily rate in column 6 is determined by dividing the corresponding rate in column 4 by 26, and adding 10 per cent. The hourly rate in column 7 is determined by dividing the corresponding rate in column 4 by 208, and adding 10 per cent. Employees paid by the day or hour are not entitled to any vacation or sick leave with pay as is the case with the monthly employee; and the 10 per cent is therefore added to offset those additional benefits received by the employee who is paid on a monthly basis.

² Flat rate, not entitled to adjusting or seniority increases.

Index Numbers of Wages in Canada, 1901 to 1927

THE following index numbers of rates of wages in Canada from 1901 to 1927 are reproduced from a report recently issued by the Canadian Department of Labor, entitled "Wages and hours of labor in Canada, 1920 to 1927." The information presented in the report is taken from union agreements and from reports of representative employers and of trade-unions secured each year. These reports are supplemented by figures obtained by officers of the department and by correspondents of the Labor Gazette resident in each city. In the present report, sheet-metal workers employed in building and construction are for the first time included with the building trades. Sheet-metal workers in factories are included under factory trades. The figures for the metal trades are for metal manufacturing industries and do not include wages in the metal trades on railways, in mining, construction, etc.

INDEX NUMBERS OF RATES OF WAGES FOR VARIOUS CLASSES OF LABOR IN CANADA, 1901 TO 1927

[Rates in 1913=100]

Year	Building trades ¹	Metal trades ²	Printing trades ³	Electric rail-ways ⁴	Steam rail-ways ⁵	Coal min-ing ⁶	Aver-age ⁷	Com-mon factory labor ⁸	Miscel-laneous factory trades ⁹	Log-ging and saw mill-ing ⁹
1901.....	60.3	68.6	60.0	64.0	68.8	82.8	67.4			
1902.....	64.2	70.2	61.6	68.0	72.0	83.8	70.0			
1903.....	67.4	73.3	62.6	71.1	75.1	85.3	72.5			
1904.....	69.7	75.9	66.1	73.1	76.9	85.1	74.5			
1905.....	73.0	78.6	68.5	73.5	74.5	86.3	75.7			
1906.....	76.9	79.8	72.2	75.7	79.3	87.4	78.6			
1907.....	80.2	82.4	78.4	81.4	81.0	93.6	82.8			
1908.....	81.5	84.7	80.5	81.8	86.1	94.8	84.9			
1909.....	83.1	86.2	83.4	81.1	86.3	95.1	85.9			
1910.....	86.9	88.8	87.8	85.7	90.1	94.2	88.9			
1911.....	90.2	91.0	91.6	88.1	95.7	97.5	92.3	94.9	95.4	93.3
1912.....	96.0	95.3	96.0	92.3	97.9	98.3	96.0	98.1	97.1	98.8
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1914.....	100.8	100.5	102.4	101.0	101.4	101.9	101.3	101.0	103.2	94.7
1915.....	101.5	101.5	103.6	97.8	101.7	102.3	101.4	101.0	106.2	89.1
1916.....	102.4	106.9	105.8	102.2	105.9	111.7	105.8	110.4	115.1	109.5
1917.....	109.9	128.0	111.3	114.6	124.6	130.8	119.9	129.2	128.0	130.2
1918.....	125.9	155.2	123.7	142.9	158.0	157.8	143.6	152.3	146.8	150.5
1919.....	148.2	180.1	145.9	163.3	183.9	170.5	165.3	180.2	180.2	169.8
1920.....	180.9	209.4	184.0	194.2	221.0	197.7	197.8	215.3	216.8	202.7
1921.....	170.5	186.8	193.3	192.1	195.9	208.3	191.2	190.6	202.0	152.6
1922.....	162.5	173.7	192.3	184.4	184.4	197.8	182.4	183.0	189.1	158.7
1923.....	166.4	174.0	188.9	186.2	186.4	197.8	183.3	181.7	196.1	170.4
1924.....	169.7	175.5	191.9	186.4	186.4	192.4	183.7	183.2	197.6	183.1
1925.....	170.4	175.4	192.8	187.8	186.4	167.6	179.7	186.3	195.5	178.7
1926.....	172.1	177.4	193.3	188.4	186.4	167.4	180.5	187.3	196.7	180.8
1927.....	179.3	178.1	195.0	189.9	198.4	167.9	184.3	187.7	199.4	182.8

¹ 7 trades from 1901 to 1920; 8 from 1921 to 1926; 9 for 1927.² 5 trades from 1901 to 1926; 4 for 1927.³ 2 trades from 1901 to 1920; 4 for 1921 and 1922; 6 from 1923 to 1927.⁴ 2 classes from 1901 to 1920; 5 classes from 1921 to 1927.⁵ 23 classes.⁶ 4 classes from 1901 to 1920; 12 classes from 1921 to 1927.⁷ Simple average of 6 preceding columns.⁸ The number of samples has been increased each year since 1920.⁹ Including some increases effected near the end of the year.

Weekly Rest Day in Turkey ¹

BY AN act dated January 2, 1925, all wage-earning and salaried employees of public administrative departments and of commercial and industrial establishments in Turkish towns of 10,000 population and over are given one day of rest in seven, with the exception that persons who are employed in the open air or during a part of the year only, or whose occupation is confined to a particular season, are exempt from the provisions of the act. This weekly rest day, of not less than 24 hours, falls on Friday, with certain exceptions.

All industrial and commercial establishments must be closed on Friday except in the case of necessary services such as public utilities, hospitals, etc.; places of amusement, recreation, or entertainment; public libraries; museums and galleries; clubs; hotels and restaurants; printing works; and those enterprises in which cessation of work would cause damage or a decrease in value of product. However, in the undertakings mentioned both the wage-earning and salaried employees must be given, in rotation, one day of rest in the week. Certain places of business, such as bakeries, groceries, hairdressing shops, etc., are allowed to remain open on Friday until midday. Permits to remain open on Friday must be obtained by the exempted establishments, these permits being good for one year.

Establishments kept open on Friday without permission may be closed by the police. Violators of the act are liable to a fine of not less than £5 (Turkish) nor more than £500, and their property is liable to seizure in payment of the fine. The proceeds of the fines go into a municipal fund which is "devoted exclusively to schemes and institutions calculated to facilitate the healthy and profitable use by the public of the weekly rest day."

The act may be applied in towns of less than 10,000 population by decision of the local municipal council.

¹ International Labor-Office. Legislative series, 1925, Turkey 1.

TREND OF EMPLOYMENT

Employment in Selected Manufacturing Industries in January, 1928

EMPLOYMENT in manufacturing industries decreased 1.1 per cent in January, 1928, as compared with December, 1927, and pay-roll totals decreased 3.9 per cent, according to reports made to the Bureau of Labor Statistics by 10,772 establishments in 54 of the chief manufacturing industries of the United States. These establishments in January, 1928, had 2,907,700 employees whose combined earnings in one week were \$75,180,008.

Inventory taking and repairs customarily slow down factory operation in January, reducing the number of workers employed, and pay-roll totals are reduced further by the fact that monthly, semimonthly, and biweekly pay rolls ending the middle of January are lessened more or less by the holiday closings.

Both employment and pay-roll totals were a little more than 5½ per cent lower in January, 1928, than in January, 1927.

The Bureau of Labor Statistics' weighted index of employment for January, 1928, is 84.2 as compared with 85.1 for December, 1927, and 89.4 for January, 1927; the weighted index of pay-roll totals for January, 1928, is 85.8 as compared with 89.3 for December, 1927, and 90.9 for January, 1927.

Comparison of Employment and Pay-Roll Totals in January, 1928, and December, 1927

TWELVE of the 54 separate industries had more employees in January, 1928, than in December, 1927, and 10 industries reported increased pay-roll totals.

The outstanding *increases* in employment in January were 8.6 per cent in automobiles and 5.4 per cent in automobile tires, these being unusually large increases for this season of the year in these industries. *Seasonal* increases of considerable size were shown in fertilizers, boots and shoes, agricultural implements, chewing tobacco, women's and men's clothing, and leather. The iron and steel industry, with a very small increase in employment, and the automobile industry, with the largest increase in employment, both reported decreased pay-roll totals, inventories and repairs being general in these industries in January, and, as their pay-rolls are usually for a half-month period, the end of the holiday season also affects their pay-roll totals.

The outstanding *decreases* in employment in January were in the carriage and wagon (19.8 per cent), stove, piano, confectionery, cigar (9.3 per cent), brick, sugar refining, stamped ware, cement, glass, paper box, and furniture (4.4 per cent) industries.

The leather and vehicle groups of industries show *increases* in employment of 4.1 per cent and 2.2 per cent, respectively, in January

TABLE 2.—PER CENT OF CHANGE, DECEMBER, 1927, TO JANUARY, 1928—12 GROUPS OF INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change December, 1927, to January, 1928		Group	Per cent of change December, 1927, to January, 1928	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.....	-3.3	-2.9	Metal products, other than iron and steel.....	-2.9	-3.9
Textiles and their products.....	-0.7	-2.8	Tobacco products.....	-7.6	-10.0
Iron and steel and their prod- ucts.....	-0.6	-3.1	Vehicles for land transporta- tion.....	+2.2	-4.0
Lumber and its products.....	-3.5	-9.7	Miscellaneous industries.....	-1.4	-4.7
Leather and its products.....	+4.1	+6.3			
Paper and printing.....	-1.5	-2.7			
Chemicals and allied products.....	-0.6	-2.4			
Stone, clay, and glass products.....	-6.1	-8.1	All Industries.....	-1.1	-3.9

Comparison of Employment and Pay-Roll Totals in January, 1928, and January, 1927

THE level of employment in manufacturing industries in January, 1928, was 5.8 per cent lower than in January, 1927, and pay-roll totals were 5.6 per cent lower.

Comparing conditions in January, 1928, with January, 1927, the tobacco group alone of the 12 groups of industries shows both increased employment and increased pay-roll totals in the current report, although both the paper and the vehicle groups show increased pay-roll totals, but with decreased employment.

The miscellaneous and the iron and steel groups show the greatest decreases, ranging from 10.1 per cent to 11.8 per cent in each item; the food and the textile groups show the smallest decreases in the two items, ranging from 0.9 to 3.8 per cent.

The notable *increases* in separate industries over this 12-month period were made in the automobile industry—9.4 per cent in employment and 35.2 per cent in pay-roll totals—followed by rubber boots, agricultural implements, and automobile tires, with substantial, though very much smaller, increases.

The pronounced *decreases* in employment were made in the ship-building, piano, petroleum refining, stove, cast-iron pipe, machine tool, steam-car building and repairing, foundry and machine-shop, and brick industries, the first having dropped 22 per cent of its employees and the last nearly 11 per cent.

The East North Central geographic division reported a very slight *increase* in employment in January, 1928, as compared with January, 1927, and a substantial *increase* (6.5 per cent) in pay-roll totals. There were large *decreases* in the New England, Middle Atlantic, West South Central and Mountain divisions, and moderate *decreases* in the remaining four divisions, the falling-off in employment having been least in the South Atlantic States and the decrease in pay-roll totals least in the Pacific and West North Central States.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS, JANUARY, 1928, WITH JANUARY, 1927

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change January, 1928, compared with January, 1927		Industry	Per cent of change January, 1928, compared with January, 1927	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products	-1.8	-0.9	Paper and printing—Contd.		
Slaughtering and meat packing	-3.2	-2.2	Printing, book and job	+0.9	+1.1
Confectionery	-4.7	-5.9	Printing, newspapers	+1.6	+3.9
Ice cream	-5.2	-1.6	Chemicals and allied products		
Flour	+1.4	+5.0	Chemicals	-8.5	-6.0
Baking	+0.7	+0.8	Fertilizers	-3.1	-0.7
Sugar refining, cane	-6.1	-1.6	Petroleum refining	-3.4	-1.9
Textiles and their products	-2.4	-3.8		-17.6	-13.5
Cotton goods	-1.3	-5.9	Stone, clay and glass products		
Hosiery and knit goods	-2.0	+0.3	Cement	-6.7	-5.2
Silk goods	-1.7	-1.4	Brick, tile, and terra cotta	-6.8	-0.7
Woolen and worsted goods	-7.4	-8.6	Pottery	-10.9	-12.2
Carpets and rugs	-2.0	-4.8	Glass	-3.6	+4.8
Dyeing and finishing textiles	+1.7	-0.9		-4.1	-4.9
Clothing, men's	-3.7	-6.0	Metal products, other than iron and steel		
Shirts and collars	+0.5	-2.8	Stamped and enameled ware	-9.6	-8.9
Clothing, women's	-2.2	+0.3	Brass, bronze, and copper products	-9.1	-8.4
Millinery and lace goods	-4.7	-8.9		-9.9	-9.0
Iron and steel and their products	-10.1	-11.8	Tobacco products	+0.4	+1.9
Iron and steel	-8.5	-9.6	Chewing and smoking tobacco and snuff	+5.4	-1.0
Cast-iron pipe	-13.0	-21.2	Cigars and cigarettes	-0.4	+2.4
Structural ironwork	-5.4	-5.0	Vehicles for land transportation		
Foundry and machine-shop products	-11.2	-13.5	Automobiles	-2.5	+5.4
Hardware	-7.3	-11.5	Carriages and wagons	+9.4	+35.2
Machine tools	-12.5	-11.7	Car building and repairing, electric-railroad	-4.2	-6.9
Steam fittings and steam and hot-water heating apparatus	-11.0	-15.3	Car building and repairing, steam-railroad	-1.4	+0.8
Stoves	-16.0	-20.3		-11.5	-11.2
Lumber and its products	-8.3	-8.7	Miscellaneous industries	-11.5	-11.3
Lumber, sawmills	-9.1	-8.4	Agricultural implements	+5.2	+10.1
Lumber, millwork	-9.5	-12.3	Electrical machinery, apparatus and supplies	-7.3	-7.5
Furniture	-5.2	-7.3	Pianos and organs	-20.7	-23.2
Leather and its products	-5.8	-6.9	Rubber boots and shoes	+6.3	+5.3
Leather	-2.8	-4.3	Automobile tires	+2.6	+4.7
Boots and shoes	-6.8	-8.1	Shipbuilding	-22.0	-20.0
Paper and printing	-0.5	+1.0	All industries	-5.8	-5.6
Paper and pulp	-3.3	-2.6			
Paper boxes	-3.1	+0.8			

Recapitulation by Geographic Divisions

GEOGRAPHIC DIVISION			GEOGRAPHIC DIVISION—contd.		
New England	-7.3	-8.5	West South Central	-8.9	-5.3
Middle Atlantic	-8.4	-9.6	Mountain	-9.2	-7.1
East North Central	+0.2	+6.5	Pacific	-3.9	-2.3
West North Central	-3.9	-2.0	All divisions	-5.8	-5.6
South Atlantic	-2.3	-4.0			
East South Central	-4.2	-7.5			

Per Capita Earnings

PER CAPITA earnings in January, 1928, for the 54 industries combined were 2.9 per cent lower than in December, 1927, and 0.2 per cent higher than in January, 1927.

Increases in per capita earnings in January, 1928, as compared with December, 1927, are shown in 12 industries—Boots and shoes, 4.6 per cent; sugar refining, 3.8 per cent; carriages and wagons, women's clothing, and ice cream, 2.7 per cent each; men's clothing 2.1 per cent; and the remaining 6 industries from 1.1 per cent to 0.1 per cent.

The outstanding decreases were in cast-iron pipe, 12 per cent; pianos, 11.2 per cent; automobiles, 8.4 per cent; and in shirts, millwork, stoves, furniture, sawmills, and structural iron.

Employees in 29 industries were averaging greater earnings in January, 1928, than in January, 1927. The automobile industry shows an increase in per capita earnings of nearly 24 per cent, but the next increases in size are 8.7 per cent in the pottery industry and 6.8 per cent in the cement industry. The greatest decrease in per capita earnings shown was 9.4 per cent in cast-iron pipe.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS JANUARY, 1928, WITH DECEMBER, 1927, AND JANUARY, 1927

Industry	Per cent of change January, 1928, compared with—		Industry	Per cent of change January, 1928, compared with—	
	December, 1927	January, 1927		December, 1927	January, 1927
Boots and shoes.....	+4.6	-1.4	Foundry and machine-shop products.....	-2.7	-2.6
Sugar refining, cane.....	+3.8	+4.9	Cigars and cigarettes.....	-2.8	+3.1
Carriages and wagons.....	+2.7	-3.0	Steam fittings and steam and hot-water heating apparatus.....	-2.8	-5.1
Clothing, women's.....	+2.7	+2.6	Chemicals.....	-2.9	+2.6
Ice cream.....	+2.7	+3.8	Fertilizers.....	-2.9	+1.3
Clothing, men's.....	+2.1	-2.8	Brick, tile, and terra cotta.....	-3.0	-1.8
Cement.....	+1.1	+6.8	Hardware.....	-3.1	-4.5
Chewing and smoking tobacco and snuff.....	+1.0	-6.5	Millinery and lace goods.....	-3.1	-4.3
Petroleum refining.....	+0.5	+4.7	Confectionery.....	-3.2	-1.2
Rubber boots and shoes.....	+0.5	-1.0	Pottery.....	-3.2	+8.7
Baking.....	+0.4	+0.3	Hosiery and knit goods.....	-3.3	+2.2
Flour.....	+0.1	+3.7	Dyeing and finishing textiles.....	-3.7	-2.7
Brass, bronze, and copper products.....	-0.1	+0.6	Carpets and rugs.....	-4.0	-2.7
Agricultural implements.....	-0.2	+4.3	Car building and repairing, steam-railroad.....	-4.3	+0.7
Slaughtering and meat packing.....	-0.4	+0.8	Cotton goods.....	-4.8	-4.6
Automobile tires.....	-0.5	+2.2	Stamped and enameled ware.....	-4.9	+0.5
Printing, book and job.....	-1.2	+0.3	Shipbuilding.....	-5.0	+2.4
Paper boxes.....	-1.3	+3.7	Silk goods.....	-5.8	+0.3
Printing, newspapers.....	-1.5	+2.4	Structural ironwork.....	-6.0	+0.5
Machine tools.....	-1.6	+0.8	Lumber, sawmills.....	-6.2	+0.7
Paper and pulp.....	-1.6	+0.4	Furniture.....	-6.4	-2.1
Woolen and worsted goods.....	-1.6	-1.3	Stoves.....	-6.9	-5.1
Car building and repairing, electric-railroad.....	-1.7	+2.0	Lumber, millwork.....	-7.6	-3.3
Iron and steel.....	-1.7	-1.0	Shirts and collars.....	-7.7	-2.8
Electrical machinery, apparatus, and supplies.....	-1.9	-0.4	Automobiles.....	-8.4	+23.7
Leather.....	-2.0	-1.8	Pianos and organs.....	-11.2	-3.2
Glass.....	-2.6	-0.8	Cast-iron pipe.....	-12.0	-9.4

Wage Changes

DURING the month ending January 15, 1928, 42 establishments in 18 industries reported wage-rate increases. These increases averaged 3.1 per cent and affected 2,220 persons, or 16 per cent of the total employees in the establishments concerned.

During the same period 54 establishments in 20 industries reported wage-rate decreases. These decreases averaged 9 per cent and

affected 21,036 persons, or 82 per cent of the total employees in the establishments concerned.

These wage adjustments exceeded in number those reported in any one month since December, 1926.

Seventy-five per cent of the employees receiving increases were in 14 establishments in the book and job printing industry; 40 per cent of the employees whose rates were decreased were in 6 cotton-goods establishments; more than 12 per cent were in 12 iron and steel plants.

TABLE 5.—WAGE ADJUSTMENTS OCCURRING BETWEEN DECEMBER 15, 1927, AND JANUARY 15, 1928

Industry	Establishments		Per cent of increase or decrease in wage rates		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
Increases							
Slaughtering and meat packing.....	190	1	5.0	5.0	10	15	(1)
Baking.....	646	3	1.0- 8.3	5.9	30	4	(1)
Hosiery and knit goods.....	243	1	4.0	4.0	25	6	(1)
Clothing, men's.....	278	1	10.0	10.0	22	7	(1)
Clothing, women's.....	201	2	1.0- 9.0	2.8	35	14	(1)
Foundry and machine-shop products.....	942	1	7.0-10.0	8.3	9	9	(1)
Machine tools.....	148	1	6.0	6.0	3	9	(1)
Stoves.....	88	1	6.0	6.0	26	12	(1)
Lumber, millwork.....	276	1	7.5	7.5	11	9	(1)
Furniture.....	429	1	5.5	5.5	9	5	(1)
Paper boxes.....	183	2	12.0-15.0	14.0	23	8	(1)
Printing, book and job.....	307	14	1.8- 4.0	2.1	1,606	27	3
Printing, newspapers.....	209	3	0.3- 4.0	2.1	78	11	(1)
Chemicals.....	126	2	5.0-10.0	8.1	91	5	(1)
Cigars and cigarettes.....	148	2	4.0- 5.0	4.4	28	9	(1)
Automobiles.....	204	1	5.0	5.0	12	6	(1)
Car building and repairing, electric-railroad.....	381	1	7.8	7.8	23	100	(1)
Electrical machinery, apparatus, and supplies.....	167	4	5.0- 9.4	4.5	179	8	(1)
Decreases							
Baking.....	646	3	10.0-15.0	11.5	24	25	(1)
Cotton goods.....	464	6	4.0-10.0	9.7	8,316	96	4
Hosiery and knit goods.....	243	2	10.0	10.0	307	94	(1)
Silk goods.....	193	2	10.0	10.0	3,645	98	7
Woolen and worsted goods.....	191	1	10.0	10.0	2,145	100	3
Carpets and rugs.....	28	1	10.0	10.0	12	100	(1)
Clothing, men's.....	278	1	10.0	10.0	36	100	(1)
Shirts and collars.....	88	1	15.0	15.0	17	9	(1)
Clothing, women's.....	201	1	10.0	10.0	13	24	(1)
Iron and steel.....	195	12	2.0- 3.0	2.7	2,659	45	1
Foundry and machine-shop products.....	942	4	10.0	10.0	467	71	(1)
Stoves.....	88	1	6.5	6.5	85	50	1
Lumber, sawmills.....	476	5	5.0-14.0	9.5	1,175	100	1
Lumber, millwork.....	276	2	5.0-10.0	7.5	216	96	1
Furniture.....	429	2	5.0-10.0	5.6	36	36	(1)
Fertilizers.....	175	1	8.3	8.3	134	66	1
Brick, tile, and terra cotta.....	361	5	10.0-15.0	10.4	525	97	2
Cigars and cigarettes.....	148	2	7.0-15.0	12.0	285	84	1
Electrical machinery, apparatus, and supplies.....	167	1	10.0	10.0	789	100	1
Automobile tires.....	55	1	5.0	5.0	150	68	(1)

¹ Less than one-half of 1 per cent.

Indexes of Employment and Pay-roll Totals in Manufacturing Industries

INDEX numbers for January, 1928, and for December, November, and January, 1927, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 6.

The general index of employment for January, 1928, is 84.2, this number being 1.1 per cent lower than the index for December, 1927, 2 per cent lower than the index for November, 1927, and 5.8 per cent lower than the index for January, 1927. The general index of pay-roll totals for January, 1928, is 85.8, this number being 3.9 per cent lower than the index for December, 1927, 2.3 per cent lower than the index for November, 1927, and 5.6 per cent lower than the index for January, 1927.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY, 1928, AND NOVEMBER, DECEMBER, AND JANUARY, 1927

[Monthly average, 1923=100]

Industry	Employment				Pay-roll totals			
	1927			1928	1927			1928
	January	November	December	January	January	November	December	January
General index	89.4	85.9	85.1	84.2	90.9	87.8	89.3	85.8
Food and kindred products	88.5	90.9	89.9	86.9	92.7	94.8	94.6	91.9
Slaughtering and meat packing.....	84.4	80.5	82.4	81.7	87.7	84.2	86.8	85.8
Confectionery.....	83.0	93.0	89.5	79.1	91.5	100.1	100.6	86.1
Ice cream.....	80.3	81.2	78.0	76.1	86.1	87.7	84.5	84.7
Flour.....	86.1	89.3	87.2	87.3	87.9	93.5	92.0	92.3
Baking.....	98.7	103.6	101.8	99.4	103.5	109.1	106.4	104.3
Sugar refining, cane.....	83.1	90.1	84.7	78.0	83.6	90.9	86.1	82.3
Textiles and their products	88.1	87.1	86.6	86.0	88.8	86.3	87.9	85.4
Cotton goods.....	86.2	87.9	86.2	85.1	85.9	87.0	86.0	80.8
Hosiery and knit goods.....	97.7	99.5	97.8	95.7	109.4	116.3	115.9	109.7
Silk goods.....	98.9	96.1	98.2	97.2	101.9	100.9	107.8	100.5
Woolen and worsted goods.....	85.0	80.7	80.1	78.7	85.0	79.6	80.5	77.7
Carpets and rugs.....	98.2	95.4	97.7	96.2	96.6	92.1	97.4	92.0
Dyeing and finishing textiles.....	98.2	101.0	100.7	99.9	101.6	104.3	105.4	100.7
Clothing, men's.....	83.8	79.5	79.6	80.7	78.9	67.0	71.5	74.2
Shirts and collars.....	81.4	83.3	82.8	81.8	80.9	85.8	86.2	78.6
Clothing, women's.....	85.3	81.3	81.7	83.4	87.8	81.8	84.1	88.1
Millinery and lace goods.....	72.0	67.0	67.9	68.6	75.5	68.1	70.3	68.8
Iron and steel and their products	88.1	80.6	79.7	79.2	90.9	81.6	82.8	80.2
Iron and steel.....	93.0	86.0	84.7	85.1	94.9	86.1	86.9	85.8
Cast-iron pipe.....	97.2	86.8	87.3	84.6	91.0	79.5	84.1	71.7
Structural ironwork.....	94.1	91.4	90.6	89.0	98.1	97.1	100.9	93.2
Foundry and machine-shop products.....	84.2	75.1	74.9	74.8	86.0	74.7	76.7	74.4
Hardware.....	83.9	78.9	78.6	77.8	92.7	84.7	85.5	82.0
Machine tools.....	102.8	90.3	90.2	90.0	113.2	99.8	101.8	100.0
Steam fittings and steam and hot-water heating apparatus.....	87.9	85.5	80.7	78.2	90.9	83.6	81.8	77.0
Stoves.....	74.8	80.2	75.4	62.8	73.8	80.2	75.8	58.8
Lumber and its products	84.0	83.0	79.8	77.0	87.1	92.1	88.0	79.5
Lumber, sawmills.....	79.1	78.0	74.6	71.9	81.9	87.7	82.9	75.0
Lumber, millwork.....	90.1	84.0	82.9	81.5	91.5	88.9	88.2	80.2
Furniture.....	97.0	99.7	96.2	92.0	102.1	109.5	105.7	94.6
Leather and its products	91.6	84.6	82.9	86.3	87.3	75.3	76.5	81.3
Leather.....	93.0	88.9	88.8	90.4	95.4	88.7	91.4	91.3
Boots and shoes.....	91.1	83.2	81.0	84.9	84.1	70.0	70.5	77.3

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY, 1928, AND NOVEMBER, DECEMBER, AND JANUARY, 1927—Continued

Industry	Employment				Pay-roll totals			
	1927			1928	1927			1928
	Janu- ary	No- vember	De- cember	Janu- ary	Janu- ary	No- vember	De- cember	Janu- ary
Paper and printing	104.3	105.1	105.4	103.8	112.7	114.7	117.0	113.8
Paper and pulp.....	94.4	93.1	92.3	91.3	100.0	99.0	99.9	97.4
Paper boxes.....	98.9	103.8	100.6	95.8	105.8	117.5	113.3	106.6
Printing, book and job.....	105.5	105.5	107.2	106.4	118.5	116.7	122.1	119.8
Printing, newspapers.....	115.1	116.8	118.3	116.9	121.0	126.7	129.2	125.7
Chemicals and allied products	98.3	91.7	90.4	89.9	101.9	96.9	98.2	95.8
Chemicals.....	96.1	97.2	95.5	93.1	106.0	108.6	111.3	105.3
Fertilizers.....	97.0	89.4	89.0	93.7	103.3	96.8	99.1	101.3
Petroleum.....	101.9	85.2	84.1	84.0	97.0	84.2	83.6	83.9
Stone, clay, and glass products	89.4	93.0	88.8	83.4	91.8	98.6	94.7	87.0
Cement.....	82.0	86.7	80.8	76.4	80.4	91.0	83.5	79.8
Brick, tile, and terra cotta.....	86.4	90.1	84.3	77.0	86.7	92.5	85.8	76.1
Pottery.....	103.8	101.0	103.9	100.1	104.3	111.8	117.3	109.3
Glass.....	89.7	95.2	90.4	86.0	96.4	102.3	99.0	91.7
Metal products, other than iron and steel	92.4	86.5	86.0	83.5	91.9	85.1	87.1	83.7
Stamped and enameled ware.....	83.7	83.5	81.8	76.1	78.6	82.8	79.4	70.2
Brass, bronze, and copper products.....	96.4	87.9	87.9	86.9	97.5	86.0	90.0	88.7
Tobacco products	77.8	89.1	84.5	78.1	77.6	91.3	87.9	79.1
Chewing and smoking tobacco and snuff.....	92.3	94.9	94.2	97.3	102.5	94.5	97.2	101.5
Cigars and cigarettes.....	75.9	88.3	83.3	75.6	74.7	90.9	86.8	76.5
Vehicles for land transportation	81.2	76.8	77.5	79.2	73.6	79.0	80.8	77.6
Automobiles.....	90.3	87.2	91.0	98.8	69.0	86.3	93.8	93.3
Carriages and wagons.....	62.6	73.5	74.8	60.0	66.4	75.3	75.0	61.8
Car building and repairing, electric-railroad.....	88.1	88.9	88.4	86.9	89.6	92.1	93.4	90.3
Car building and repairing, steam-railroad.....	75.5	69.5	68.2	66.8	75.8	73.7	71.9	67.3
Miscellaneous industries	100.7	80.7	80.4	80.1	107.2	92.4	99.8	95.1
Agricultural implements.....	93.8	88.6	94.7	98.7	104.1	99.7	110.1	114.6
Electrical machinery, apparatus, and supplies.....	96.3	94.4	92.0	89.3	101.1	96.0	98.2	93.5
Pianos and organs.....	93.3	88.4	85.0	74.0	98.0	98.1	97.3	75.3
Rubber boots and shoes.....	89.5	94.4	98.6	95.1	102.9	109.6	111.8	108.4
Automobile tires.....	102.4	97.3	99.7	105.1	103.8	94.1	103.6	108.7
Shipbuilding.....	105.5	83.9	85.1	82.3	112.0	88.1	97.5	89.6

Table 7 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to January, 1928.

Following Table 7 are graphs (p. 147), made from these index numbers, showing clearly both the course of employment and the course of pay-roll totals for the period January, 1924, to January, 1928.

TABLE 7.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES JANUARY, 1923, TO JANUARY, 1928

[Monthly average, 1923=100]

Month	Employment						Pay-roll totals					
	1923	1924	1925	1926	1927	1928	1923	1924	1925	1926	1927	1928
January.....	98.0	95.4	90.0	92.3	89.4	84.2	91.8	94.5	90.0	93.9	90.9	85.8
February.....	99.6	96.6	91.6	93.3	91.0	-----	95.2	99.4	95.1	97.9	96.4	-----
March.....	101.8	96.4	92.3	93.7	91.4	-----	100.3	99.0	96.6	99.1	97.7	-----
April.....	101.8	94.5	92.1	92.8	90.6	-----	101.3	96.9	94.2	97.2	96.6	-----
May.....	101.8	90.8	90.9	91.7	89.7	-----	104.8	92.4	94.4	95.6	95.6	-----
June.....	101.9	87.9	90.1	91.3	89.1	-----	104.7	87.0	91.7	95.5	93.3	-----
July.....	100.4	84.8	89.3	89.8	87.3	-----	99.9	80.8	89.6	91.2	89.1	-----
August.....	99.7	85.0	89.9	90.7	87.4	-----	99.3	83.5	91.4	94.6	91.0	-----
September.....	99.8	86.7	90.9	92.2	88.0	-----	100.0	86.0	90.4	95.1	90.1	-----
October.....	99.3	87.9	92.3	92.5	87.6	-----	102.3	88.5	96.2	98.6	91.2	-----
November.....	98.7	87.8	92.5	91.4	85.9	-----	101.0	87.6	96.2	95.4	87.8	-----
December.....	96.9	89.4	92.6	90.9	85.1	-----	98.9	91.7	97.3	95.6	89.3	-----
Average.....	100.0	90.3	91.2	91.9	88.5	84.2	100.0	90.6	93.6	95.8	92.4	85.8

11 month only.

Indexes of Employment in Manufacturing Industries, in Each Geographic Division of the United States, by Months, 1926 and 1927

INDEX numbers for each month of 1926 and 1927, showing relatively the variation in number of persons employed in each of the nine geographic divisions of the United States, are shown in Table 8. These index numbers are computed with the data for April, 1924, used as 100, that being the first month for which the Bureau of Labor Statistics compiled data as to employment by geographic divisions

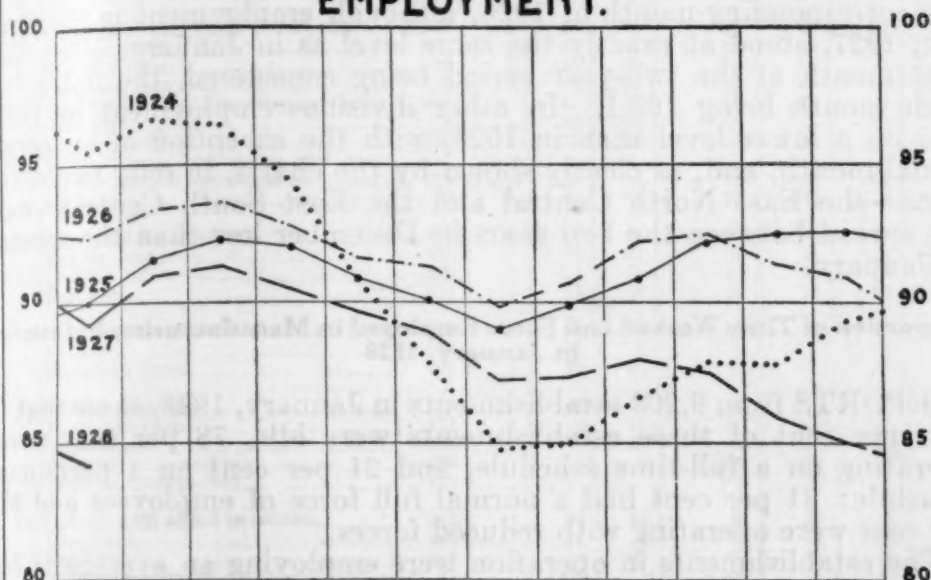
TABLE 8.—INDEXES OF EMPLOYMENT IN MANUFACTURING INDUSTRIES IN EACH GEOGRAPHIC DIVISION IN 1926 AND 1927, BY MONTHS

[April, 1924=100]

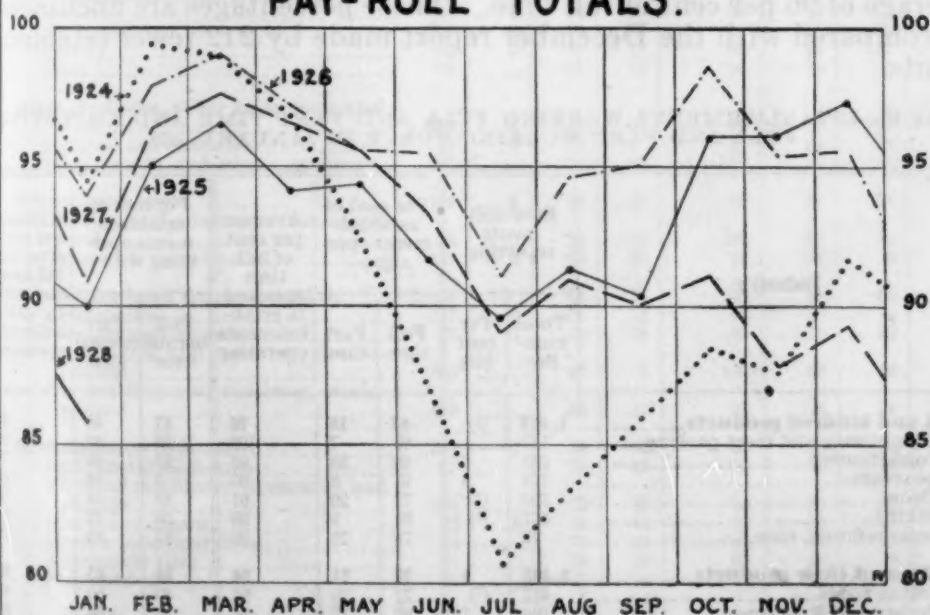
Month and year	Geographic division								
	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
1926									
January.....	98.0	98.2	99.6	96.6	102.1	102.5	95.9	97.5	92.6
February.....	99.3	98.7	101.1	96.8	103.0	103.1	96.6	94.9	92.7
March.....	99.9	98.5	101.9	96.1	104.3	102.5	96.2	93.4	93.9
April.....	97.8	97.4	100.5	96.0	102.6	102.3	96.8	93.9	97.6
May.....	95.8	96.3	98.5	95.9	100.8	99.8	96.4	97.0	100.8
June.....	94.2	95.7	98.3	97.2	100.3	98.3	97.9	100.7	99.7
July.....	89.6	94.0	96.9	96.7	99.1	98.6	98.0	98.2	99.2
August.....	91.3	94.2	98.7	98.3	99.8	99.5	99.5	97.4	99.5
September.....	94.8	96.2	99.3	99.0	102.8	98.4	98.6	101.0	99.1
October.....	96.3	97.0	98.5	99.5	103.7	97.2	98.3	100.4	99.3
November.....	96.2	96.2	94.8	97.5	103.7	96.9	97.5	99.9	97.9
December.....	95.2	95.4	92.6	95.4	103.6	96.9	97.2	98.1	95.2
1927									
January.....	94.4	93.4	91.6	93.5	102.8	94.6	95.4	95.3	91.6
February.....	95.5	94.4	95.8	94.0	104.3	95.6	96.0	92.0	91.8
March.....	95.1	94.4	97.4	93.8	105.2	95.1	94.9	90.9	94.4
April.....	93.8	92.7	97.5	93.7	105.4	94.4	93.8	92.1	95.5
May.....	92.6	91.3	97.3	94.5	103.7	93.0	92.3	95.1	97.2
June.....	91.2	90.7	96.1	96.6	103.1	92.7	92.4	96.7	99.0
July.....	90.0	89.3	92.9	95.7	102.0	90.9	90.7	98.4	98.0
August.....	89.4	89.3	94.2	96.0	101.5	92.1	91.5	97.0	98.3
September.....	91.4	90.3	93.0	96.0	104.0	92.3	92.8	95.9	98.0
October.....	91.1	90.1	92.3	95.4	103.7	92.9	91.2	94.4	97.6
November.....	89.8	88.6	89.2	92.1	103.0	91.6	89.8	95.3	95.1
December.....	88.0	87.4	90.0	90.6	102.1	91.7	88.4	91.3	92.0

MANUFACTURING INDUSTRIES. MONTHLY INDEXES, 1924-1928. MONTHLY AVERAGE 1923 = 100.

EMPLOYMENT.



PAY-ROLL TOTALS.



The chart on page 150, made from the index numbers of Table 8, shows for each geographic division the trend of employment in each month of 1927 as compared with the corresponding month of 1926.

Decidedly the best showing of employment during 1927 was made by the South Atlantic division, which started in January, 1927, with an index of 102.8, or 0.7 per cent above the index for January, 1926, and continued on a higher level than in 1926, until October when the indexes for the two years were identical. The indexes for November and December, 1927, were both below the indexes for the corresponding month of 1926, although employment in December, 1927, stood at exactly the same level as in January, 1926, the first month of the two-year period being considered, the index for each month being 102.1. In other divisions employment in 1927 was on a lower level than in 1926, with the exception of an occasional month, and, as clearly shown by the charts, in only two divisions—the East North Central and the East South Central—was the spread between the two years in December less than the spread in January.

Proportion of Time Worked and Force Employed in Manufacturing Industries in January, 1928

REPORTS from 9,203 establishments in January, 1928, show that 1 per cent of these establishments were idle, 78 per cent were operating on a full-time schedule, and 21 per cent on a part-time schedule; 31 per cent had a normal full force of employees and 67 per cent were operating with reduced forces.

The establishments in operation were employing an average of 84 per cent of a normal full force of employees and were operating an average of 96 per cent of full time. These percentages are unchanged as compared with the December report made by 212 fewer establishments.

TABLE 9.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN JANUARY, 1928

Industry	Establishments reporting		Per cent of establishments operating—		Average per cent of full time operated in establishments operating	Per cent of establishments operating with—		Average per cent of normal full force employed by establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	1,453	(1)	83	16	96	41	58	88
Slaughtering and meat packing.....	153		93	7	100	58	42	93
Confectionery.....	251	1	69	30	95	13	86	74
Ice cream.....	174	1	91	8	99	5	94	63
Flour.....	292	(1)	71	29	91	46	54	96
Baking.....	571	(1)	91	9	99	58	42	92
Sugar refining, cane.....	12		75	25	90	17	83	79
Textiles and their products	1,595	1	77	21	96	34	65	90
Cotton goods.....	417	(1)	71	29	94	40	60	92
Hosiery and knit goods.....	184	1	82	17	96	39	60	89
Silk goods.....	159		75	25	96	41	59	91
Woolen and worsted goods.....	171	1	77	22	97	29	70	85
Carpets and rugs.....	22		77	23	93	36	64	96
Dyeing and finishing textiles.....	93	1	65	34	91	29	70	92
Clothing, men's.....	209	4	81	15	96	26	69	86
Shirts and collars.....	61	2	85	13	98	36	62	95
Clothing, women's.....	134	2	89	9	98	25	72	91
Millinery and lace goods.....	55		89	11	99	22	78	84

¹ Less than one-half of 1 per cent.

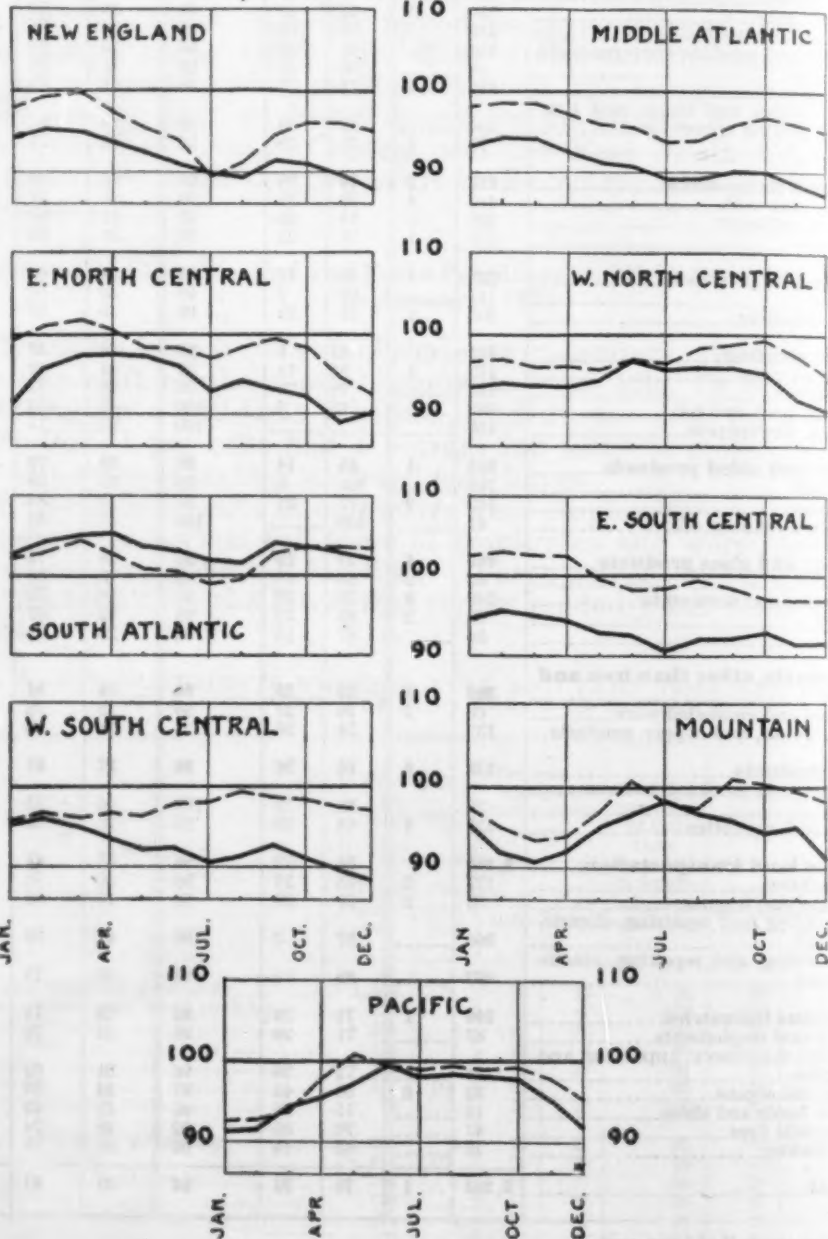
TABLE 9.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN JANUARY, 1928—Continued

Industry	Establishments reporting		Per cent of establishments operating—		Average per cent of full time operated in establishments operating	Per cent of establishments operating with—		Average per cent of normal full force employed by establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Iron and steel and their products	1,553	1	63	36	93	20	79	80
Iron and steel.....	155	6	68	26	92	12	82	83
Cast-iron pipe.....	29	3	48	48	85	24	72	79
Structural ironwork.....	152	—	75	25	96	26	74	83
Foundry and machine-shop products.....	844	(1)	61	39	93	20	80	78
Hardware.....	54	—	56	44	93	11	89	81
Machine tools.....	136	1	75	24	96	21	78	82
Steam fittings and steam and hot-water heating apparatus.....	104	—	56	44	91	19	81	79
Stoves.....	79	4	57	39	92	22	75	77
Lumber and its products	1,020	2	70	28	95	25	73	81
Lumber, sawmills.....	419	4	76	21	96	25	71	78
Lumber, millwork.....	228	1	54	45	93	13	86	75
Furniture.....	373	1	73	26	95	31	68	88
Leather and its products	322	1	84	16	97	31	69	90
Leather.....	117	—	93	7	99	32	68	88
Boots and shoes.....	205	1	78	21	96	30	69	91
Paper and printing	783	(1)	91	9	98	50	50	96
Paper and pulp.....	172	1	88	11	97	44	55	94
Paper boxes.....	165	—	79	21	96	28	72	87
Printing, book and job.....	288	—	95	5	100	48	52	100
Printing, newspapers.....	158	—	—	—	100	85	15	102
Chemicals and allied products	313	1	85	14	98	20	79	78
Chemicals.....	105	—	91	9	98	32	68	91
Fertilizers.....	167	2	77	21	97	13	84	59
Petroleum refining.....	41	—	100	—	100	17	83	79
Stone, clay, and glass products	469	5	77	19	95	20	75	81
Cement.....	85	2	82	15	93	13	85	75
Brick, tile, and terra cotta.....	240	8	70	23	95	16	76	76
Pottery.....	60	2	83	15	96	42	57	94
Glass.....	84	—	87	13	98	25	75	83
Metal products, other than iron and steel	300	1	75	25	96	19	81	81
Stamped and enameled ware.....	63	2	78	21	95	19	79	75
Brass, bronze, and copper products.....	137	—	74	26	96	18	82	84
Tobacco products	159	6	68	26	96	27	67	90
Chewing and smoking tobacco and snuff.....	26	—	88	12	100	46	54	97
Cigars and cigarettes.....	133	8	64	29	95	23	69	80
Vehicles for land transportation	1,086	(1)	88	12	98	37	63	80
Automobiles.....	177	1	75	24	96	20	79	80
Carriages and wagons.....	53	2	70	28	96	15	83	62
Car building and repairing, electric-railroad.....	364	—	97	3	100	61	39	93
Car building and repairing, steam-railroad.....	402	—	88	12	98	28	72	78
Miscellaneous industries	340	1	71	29	95	29	71	86
Agricultural implements.....	87	—	71	29	96	24	76	89
Electrical machinery, apparatus, and supplies.....	134	—	72	28	96	31	69	85
Pianos and organs.....	32	6	50	44	87	34	66	73
Rubber boots and shoes.....	12	—	75	25	96	58	42	100
Automobile tires.....	47	—	70	30	92	26	74	88
Shipbuilding.....	28	—	86	14	99	21	79	70
Total	9,203	1	78	21	96	31	67	84

1 Less than one-half of 1 per cent.

TREND OF EMPLOYMENT. GEOGRAPHIC DIVISIONS.

1926 ----- 1927 -----
(APRIL 1924 = 100.)



Employment and Pay-Roll Totals of Railroad Employees, December, 1926, and November and December, 1927

THE number of employees on the 15th of December, 1927, and the total earnings of employees in the entire month of December, 1927, on Class I railroads of the United States, are shown in the table following, together with similar information for November, 1927, and December, 1926. The data are presented for all occupations combined, excluding executives and officials, and also for the six general groups of occupations; under each group data are shown separately for a few of the more important occupations.

Class I railroads are roads having operating revenues of \$1,000,000 a year and over.

EMPLOYMENT AND TOTAL MONTHLY EARNINGS OF RAILROAD EMPLOYEES— DECEMBER, 1926, AND NOVEMBER AND DECEMBER, 1927

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	1926, December	1927		1926, December	1927	
		November	December		November	December
Professional, clerical, and general	286, 120	278, 023	275, 361	\$39, 768, 868	\$39, 430, 646	\$39, 605, 470
Clerks.....	167, 711	160, 808	158, 632	22, 100, 032	21, 557, 016	21, 645, 341
Stenographers and typists.....	25, 533	25, 043	24, 914	3, 184, 572	3, 180, 231	3, 207, 228
Maintenance of way and structures	377, 689	408, 836	358, 153	35, 631, 397	37, 345, 361	33, 667, 019
Laborers, extra gang and work train.....	54, 611	67, 345	48, 752	4, 025, 073	5, 034, 575	3, 596, 744
Laborers, track and roadway section.....	188, 295	206, 290	180, 058	14, 010, 784	14, 512, 068	12, 987, 233
Maintenance of equipment and stores	516, 550	479, 329	474, 711	68, 802, 306	62, 354, 589	61, 803, 788
Carmen.....	111, 430	102, 856	101, 140	16, 752, 916	15, 104, 995	14, 733, 986
Machinists.....	60, 742	58, 116	57, 701	9, 840, 376	9, 006, 858	8, 953, 477
Skilled trades helpers.....	114, 664	105, 745	104, 281	13, 012, 435	11, 626, 962	11, 445, 419
Laborers (shops, engine houses, power plants, and stores).....	43, 594	40, 306	40, 054	4, 233, 086	3, 819, 957	3, 895, 493
Common laborers (shops, engine houses, power plants, and stores).....	59, 712	53, 833	53, 617	4, 880, 441	4, 288, 541	4, 252, 780
Transportation, other than train, engine, and yard	209, 641	203, 243	199, 707	26, 038, 149	25, 098, 670	25, 199, 984
Station agents.....	30, 587	30, 212	30, 182	4, 837, 302	4, 723, 021	4, 838, 971
Telegraphers, telephoners, and towermen.....	25, 514	24, 094	23, 912	3, 945, 152	3, 671, 035	3, 762, 122
Truckers (stations, warehouses, and platforms).....	39, 745	37, 086	35, 329	3, 656, 013	3, 440, 433	3, 315, 330
Crossing and bridge flagmen and gatemen.....	22, 016	21, 590	21, 539	1, 678, 199	1, 665, 474	1, 664, 516
Transportation (yard masters, switch tenders, and hostlers)	24, 393	22, 895	22, 725	4, 637, 598	4, 403, 395	4, 462, 203
Transportation, train and engine	342, 240	319, 749	312, 699	70, 471, 789	63, 340, 384	62, 935, 399
Road conductors.....	38, 066	35, 915	35, 238	9, 395, 519	8, 425, 214	8, 390, 996
Road brakemen and flagmen.....	77, 607	72, 524	70, 617	13, 919, 652	12, 369, 783	12, 125, 488
Yard brakemen and yard helpers.....	57, 852	53, 674	52, 357	10, 458, 639	9, 485, 901	9, 324, 802
Road engineers and motormen.....	45, 790	42, 786	42, 021	12, 548, 555	11, 209, 366	11, 218, 273
Road firemen and helpers.....	47, 341	44, 218	43, 272	9, 342, 635	8, 399, 641	8, 419, 264
All occupations	1, 756, 933	1, 712, 075	1, 643, 356	245, 350, 107	231, 999, 045	227, 676, 863

State Reports on Employment

California

THE January, 1928, Labor Market Bulletin, issued by the Division of Labor Statistics and Law Enforcement of the Department of Industrial Relations of California, shows the following changes in volume of employment and weekly pay roll from December, 1926, to December, 1927, in 781 establishments in that State:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 781 CALIFORNIA ESTABLISHMENTS, DECEMBER, 1927, COMPARED WITH DECEMBER, 1926

Industry	Number of establishments reporting	Employees		Weekly pay roll	
		Number in December, 1927	Per cent of change as compared with December, 1926	Amount in December, 1927	Per cent of change as compared with December, 1926
Stone, clay, and glass products:					
Miscellaneous stone and mineral products.....	11	1,305	+9.7	\$35,635	-3.2
Lime, cement, and plaster.....	7	1,369	-25.4	43,521	-22.7
Brick, tile, and pottery.....	22	3,372	+1.5	83,784	+3.1
Glass.....	7	859	+22.0	25,982	+8.4
Total.....	47	6,905	-2.1	188,922	-4.8
Metals, machinery, and conveyances:					
Agricultural implements.....	6	1,810	+38.3	40,680	+32.5
Automobiles, including bodies and parts.....	15	1,707	-27.4	50,299	-30.5
Brass, bronze, and copper products.....	9	916	-13.7	26,753	-12.2
Engines, pumps, boilers, and tanks.....	8	815	+1.4	20,106	0
Iron and steel forging, bolts, nuts, etc.....	8	2,680	-12.1	85,525	-15.5
Structural and ornamental steel.....	22	4,248	-5.0	140,765	+7
Ship and boat building and naval repairs.....	6	5,542	-16.0	183,448	-15.1
Tin cans.....	7	1,869	-27.9	52,003	-24.5
Other iron-foundry and machine-shop products.....	74	6,759	-13.4	216,930	-14.2
Other sheet-metal products.....	22	1,563	-3.0	45,424	-9.1
Cars, locomotives, and railway repair shops.....	18	8,393	-7	257,046	+1.9
Total.....	195	36,302	-9.5	1,133,979	-9.5
Wood manufactures:					
Sawmills and logging.....	22	11,115	+7.1	309,639	+8.4
Planing mills, sash and door factories, etc.....	59	9,533	-9	265,194	-4
Other wood manufactures.....	43	5,034	+2.1	147,610	+3.7
Total.....	124	25,682	+3.0	722,443	+4.1
Leather and rubber goods:					
Tanning.....	7	640	-7.1	19,048	-3
Finished leather products.....	5	432	-16.3	9,663	-5.2
Rubber products.....	7	2,194	-21.4	70,143	-12.5
Total.....	19	3,266	-18.2	98,854	-9.7
Chemicals, oils, paints, etc.:					
Explosives.....	4	477	-6.8	13,609	-13.0
Mineral-oil refining.....	7	8,291	-26.7	324,694	-25.7
Paints, dyes, and colors.....	8	639	-12.5	16,858	-10.5
Miscellaneous chemical products.....	14	1,898	-12.6	52,909	-12.9
Total.....	33	11,305	-23.2	408,070	-23.3
Printing and paper goods:					
Paper boxes, bags, cartons, etc.....	14	2,131	-5	52,937	-2.8
Printing.....	57	2,403	-6.0	89,726	-1.5
Publishing.....	16	3,674	+7	141,788	+1.5
Other paper products.....	8	1,004	-1.3	25,087	-1.3
Total.....	95	9,212	-1.6	309,538	-4

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 781 CALIFORNIA ESTABLISHMENTS, DECEMBER, 1927, COMPARED WITH DECEMBER, 1926—Continued

Industry	Number of establishments reporting	Employees		Weekly pay roll	
		Number in December, 1927	Per cent of change as compared with December, 1926	Amount in December, 1927	Per cent of change as compared with December, 1926
Textiles:					
Knit goods.....	13	1,187	+3.0	\$23,323	-9.1
Other textile products.....	6	1,492	-6.7	33,296	-8.1
Total.....	19	2,679	-2.6	56,619	-8.5
Clothing, millinery, and laundering:					
Men's clothing.....	25	2,605	-14.8	57,058	-13.6
Women's clothing.....	9	899	+1	18,172	+5.2
Millinery.....	6	629	+9.0	12,252	+14.3
Laundering, cleaning, and dyeing.....	22	3,675	+4.8	82,447	+9
Total.....	62	7,808	-2.9	169,929	-3.3
Foods, beverages, and tobacco:					
Canning, preserving of fruits and vegetables.....	35	4,150	-21.2	87,554	-18.0
Canning, packing of fish.....	7	1,095	+35.0	9,421	+25.6
Confectionery and ice cream.....	21	1,525	+1	34,075	-1.8
Groceries, not elsewhere specified.....	5	466	-4.9	11,673	-1.2
Bread and bakery products.....	20	3,660	+1.4	104,282	+2.6
Sugar.....	5	2,556	+3.7	69,851	-2.0
Slaughtering and meat products.....	15	2,831	+1.6	87,264	+3.8
Cigars and other tobacco products.....	5	969	-8.4	16,825	-15.0
Beverages.....	3	460	+5.5	10,193	+9.9
Dairy products.....	9	1,612	+7.8	52,627	+14.2
Flour and grist mills.....	14	1,227	-9.8	35,301	-5.9
Ice manufactures.....	15	1,067	-6.2	36,171	-2.7
Other food products.....	13	1,328	+14.9	28,258	+15.1
Total.....	167	22,946	-2.8	583,495	-1.5
Water, light, and power.....	5	8,060	-7	243,620	-7
Miscellaneous.....	15	2,177	-16.7	64,421	-5.5
Grand total, all industries.....	781	136,342	-6.2	3,979,800	-6.1

Illinois

THE following statistics showing the changes in employment and earnings in Illinois factories in December, 1927, as compared with November, 1927, are taken from the January, 1928, issue of the Labor Bulletin, published by the Illinois Department of Labor:

CHANGES IN EMPLOYMENT AND EARNINGS IN ILLINOIS FACTORIES FROM NOVEMBER TO DECEMBER, 1927

Industry	Per cent of change from November to December, 1927			
	Employment			Total earnings
	Males	Females	Total employees	
Stone, clay, and glass products:				
Miscellaneous stone and mineral products.....	-5.4	0	-5.3	-0.5
Lime, cement, and plaster.....	-4.1	-33.3	-4.5	-16.4
Brick tile and pottery.....	-6.0	-5.1	-6.0	-11.5
Glass.....	-3	-5.3	-1.4	-3.1
Total.....	-4.2	-5.1	-4.3	-7.3

CHANGES IN EMPLOYMENT AND EARNINGS IN ILLINOIS FACTORIES FROM
NOVEMBER TO DECEMBER, 1927—Continued

Industry	Per cent of change from November to December, 1927			
	Employment			Total earnings
	Males	Females	Total employees	
Metals, machinery, conveyances:				
Iron and steel.....	-1	+11.9	+3	-2.6
Sheet-metal work and hardware.....	-8	+1.3	+1.1	-1.6
Tools and cutlery.....	+2	+6.9	+9	+3.9
Cooking, heating, ventilating apparatus.....	-3.4	+4.0	-3.2	-6
Brass, copper, zinc, babbitt metal.....	-8	-7.5	-9	-4.9
Cars and locomotives.....	-13.0	-1.3	-12.8	-13.8
Automobiles and accessories.....	-6.8	-8.7	-5.5	-8.8
Machinery.....	-4	-5	-4	-2
Electrical apparatus.....	-2.0	-7.7	-5.1	-3.9
Agricultural implements.....	+2.1	+8.3	+2.2	-1.2
Instruments and appliances.....	+1.8	+5.9	+2.4	+6.0
Watches, watchcases, clocks, and jewelry.....	+4	-1.3	-3	-4.7
Total.....	-1.1	-8	-1.0	-2.7
Wood products:				
Sawmill and planing-mill products.....	-8.3	-14.3	-8.5	-6.4
Furniture and cabinetwork.....	-2.5	+5.1	-1.8	-4.8
Pianos, organs, and other musical instruments.....	-7.2	-2.9	-6.5	-3.6
Miscellaneous wood products.....	-9.1	-7.8	-9.1	-6.5
Household furnishings.....	-3.3	-12.6	-6.2	-10.1
Total.....	-5.3	-2.4	-5.0	-5.3
Furs and leather goods:				
Leather.....	-2	+4.3	+4	-2.3
Furs and fur goods.....	-20.0	-8.3	-14.5	-19.0
Boots and shoes.....	+1.1	-2.5	0	+11.7
Miscellaneous leather goods.....	+5.5	+1.0	+2.7	+11.8
Total.....	+9	-1.3	+2	+8.3
Chemicals, oils, paints, etc:				
Drugs and chemicals.....	-4.9	-1.7	-3.5	-1.0
Paints, dyes, and colors.....	-3.6	0	-1.8	+2.1
Mineral and vegetable oil.....	+3.1	-18.3	+1.3	+5.2
Miscellaneous chemical products.....	-1.6	+4	-1.4	+2.4
Total.....	-5	-3.9	-1.0	+2.8
Printing and paper goods:				
Paper boxes, bags, and tubes.....	-3.3	-2.5	-3.1	-4.4
Miscellaneous paper goods.....	+2.2	+3.4	+2.8	+3.7
Job printing.....	+4.4	+2.1	+3.9	+9.0
Newspapers and periodicals.....	+2.8	+6.9	+2.7	+3.3
Edition bookbinding.....	-1.3	-2.5	-1.8	-2.1
Total.....	+1.7	+5	+1.4	+3.9
Textiles:				
Cotton and woolen goods.....	+1.1	+2.7	+1.8	-4
Knit goods, cotton and woolen hosiery.....	-18.7	-6.9	-6.8	-6.7
Thread and twine.....	-2.6	-3.5	-2.3	-3.9
Total.....	-10.8	-5.4	-5.2	-5.3
Clothing, millinery, laundering:				
Men's clothing.....	+6.6	-1.5	+2.1	+15.3
Men's shirts and furnishings.....	0	-2.7	-9.2	-12.6
Overalls and work clothing.....	-4.9	+2.3	+1.5	-7
Men's hats and caps.....	-43.6	-54.2	-47.6	-22.6
Women's clothing.....	+2.1	+7.5	+6.1	+8.6
Women's underwear.....	0	-7.3	-6.4	-17.4
Women's hats.....	+31.9	+33.9	+33.4	+38.6
Laundering, cleaning and dyeing.....	0	-2.3	-1.6	-1.2
Total.....	+5.3	+3	+1.0	+9.8

CHANGES IN EMPLOYMENT AND EARNINGS IN ILLINOIS FACTORIES FROM
NOVEMBER TO DECEMBER, 1927—Continued

Industry	Per cent of change from November to December, 1927			
	Employment			Total earnings
	Males	Females	Total employees	
Food, beverages, and tobacco:				
Flour, feed, and other cereal products.....	-2.8	-1.5	-2.7	-7.0
Fruit and vegetable canning and preserving.....	-39.0	-35.5	-38.5	-30.9
Miscellaneous groceries.....	-2.8	-6.2	-.8	-5.6
Slaughtering and meat packing.....	+3	-1.1	+2	-1.3
Dairy products.....	-.6	+14.0	+1	+5
Bread and other bakery products.....	-2.3	-4.0	-2.8	-3.3
Confectionery.....	+3.2	+2.8	+1.6	+2
Beverages.....	-12.2	-21.7	-1.9	-.5
Cigars and other tobacco products.....	0	-3.0	-1.8	+9.7
Manufactured ice.....	-17.5		-17.5	-28.2
Ice cream.....	+9	+15.4	+1.6	-1.3
Total.....	-1.2	-1.7	-.9	-2.2
Total, all manufacturing industries.....	-1.1	-1.2	-1.1	-.9
Trade—Wholesale and retail:				
Department stores.....	+10.0	+21.1	+16.2	+5.5
Wholesale dry goods.....	-4.9	-22.6	-15.1	-10.9
Wholesale groceries.....	-2.4	-7.6	-4.0	-3.6
Mail order houses.....	+8.8	+14.1	+10.9	+13.9
Total.....	+7.8	+13.2	+10.4	+11.3
Public utilities:				
Water, light, and power.....	+3.0	-2.5	+2.4	+9
Telephone.....	+2	-.1	0	-1.5
Street railways.....	-1.4	-5.2	-.9	-3.2
Railway-car repair shops.....	+2	-3.8	+2	-1.5
Total.....	-.1	-.2	-.1	-1.9
Coal mining.....	+2.9		+2.9	+12.2
Building and contracting:				
Building construction.....	-18.9		-18.9	-25.1
Road construction.....	-30.7		-30.7	-41.7
Miscellaneous contracting.....	-16.9		-16.9	-19.9
Total.....	-19.1		-19.1	-24.7
Grand total, all industries.....	-1.1	+7	-.5	-.8

Iowa

THE January, 1928, issue of the Iowa Employment Survey, published by the bureau of labor of that State, shows the following changes in volume of employment from December, 1927, to January, 1928:

CHANGES IN VOLUME OF EMPLOYMENT IN IOWA, DECEMBER, 1927, TO JANUARY, 1928

Industry	Number of firms reporting	Employees on pay roll, January, 1928		Industry	Number of firms reporting	Employees on pay roll, January, 1928	
		Number	Per cent of change as compared with December, 1927			Number	Per cent of change as compared with December, 1927
Food and kindred products:				Leather products:			
Meat packing.....	8	8,687	+2.7	Shoes.....	2	273	-1.5
Cereals.....	2	1,065	-2.0	Saddlery and harness.....	5	219	+1.3
Flour.....	3	116	+4.5	Fur goods and tanning.....	5	129	-1.5
Bakery products.....	9	1,025	-3.0	Gloves and mittens.....	3	187	-15.4
Confectionery.....	5	296	-11.9	Total.....	15	808	-4.6
Poultry, produce, butter, etc.....	7	800	-23.9	Paper products, printing and publishing:			
Sugar, starch, sirup, glucose, etc.....	3	927	-34.6	Paper products.....	4	293	+6.2
Other food products, coffee, etc.....	9	325	-3.9	Printing and publishing.....	12	2,185	-2.3
Total.....	46	13,241	-4.4	Total.....	16	2,478	-1.4
Textiles:				Patent medicines, chemicals, and compounds.....	8	515	+1.8
Clothing, men's.....	11	1,162	+7.4	Stone and clay products:			
Millinery.....	2	152	0	Cement, plaster, and gypsum.....	6	1,063	+6.2
Clothing, women's and woolen goods.....	3	535	+1.8	Brick and tile.....	12	563	-14.2
Hosiery, awnings, etc.....	5	816	+1.2	Marble and granite, crushed rock and stone.....	3	53	-29.3
Buttons, pearl.....	8	723	+2.4	Total.....	21	1,679	-3.1
Total.....	29	3,398	+3.1	Tobacco and cigars.....	2	238	-2.9
Iron and steel works:				Railway car shops.....	7	4,323	-5.9
Foundry and machine shops.....	27	2,063	0	Various industries:			
Brass, bronze products, plumbers' supplies.....	4	531	+4.5	Auto tires and tubes.....	2	101	-33.1
Autos, tractors, and engines.....	5	2,194	+7.8	Brooms and brushes.....	3	89	-11.9
Furnaces.....	5	214	0	Laundries.....	5	231	0
Pumps.....	5	398	+14.7	Mercantile.....	7	2,907	-21.1
Agricultural implements.....	10	1,261	+9.5	Public service.....	3	3,819	-1.6
Washing machines.....	8	2,478	-6.4	Seeds.....	3	463	+2.7
Total.....	64	9,139	+1.9	Wholesale houses.....	23	1,130	-1.3
Lumber products:				Commission houses.....	9	220	-7.6
Millwork, interiors, etc.....	18	2,802	-7.6	Baskets.....	4	168	-2.9
Furniture, desks, etc.....	7	757	+34.0	Other industries.....	7	1,098	-4.6
Refrigerators.....	3	140	0	Total.....	66	10,226	-8.6
Coffins and undertakers' supplies.....	5	155	0	Grand total.....	312	49,994	-3.3
Carriages, wagons, and truck bodies.....	5	105	+15.4				
Total.....	38	3,959	-1.6				

Maryland

THE commissioner of labor and statistics of Maryland furnished the following report showing the changes in volume of employment and weekly pay rolls in Maryland from December, 1927, to January, 1928. The pay-roll period is for one week, except that for "rubber tires," for which the period is one-half month.

CHANGES IN EMPLOYMENT AND IN AMOUNT OF WEEKLY PAY ROLL IN 183 MARYLAND ESTABLISHMENTS FROM DECEMBER, 1927, TO JANUARY, 1928

Industry	Estab- lish- ments reporting for both months	Employment		Pay roll	
		Number of em- ployees, January, 1928	Per cent of change as com- pared with Decem- ber, 1927	Amount, January, 1928	Per cent of change as com- pared with Decem- ber, 1927
Food products.....	23	1,842	-16.0	\$43,532	-11.1
Bakeries.....	4	620	-1.6	17,702	-2.1
Beverages.....	4	135	-4.3	3,718	-3.7
Confectionery.....	7	741	-30.9	11,623	-28.6
Ice cream.....	4	244	-1.3	8,195	-1.3
Other food products.....	4	102	+9	2,294	-6.1
Textiles.....	32	6,812	-3.6	109,641	-5.3
Men's and boys' clothing.....	13	3,108	-5.1	53,825	-2.7
Women's and children's clothing.....	5	752	+2	9,964	+22.0
Cotton goods.....	6	1,565	-3.9	22,358	-13.9
Silk goods.....	3	437	+5.5	5,641	-7.2
Other textiles.....	5	950	-5.2	17,853	-11.8
Iron, steel, and their products.....	13	4,540	-2	107,753	-1
Plumbers' supplies.....	5	1,125	-9	29,395	-4.3
Tinware.....	4	2,714	-2	60,028	+6
Other iron and steel products.....	4	701	+1.0	18,330	+5.0
Lumber and its products.....	19	1,261	-11.1	31,736	-11.7
Wooden boxes.....	4	133	-8.5	2,254	-8.5
Furniture.....	8	620	-6.0	16,813	-8.5
Lumber and millwork.....	7	508	-14.8	12,669	-16.2
Leather and its products.....	11	1,588	-2.7	30,185	+3.9
Boots and shoes.....	6	974	-4.0	16,854	+4.0
Other leather products.....	5	614	+8	13,331	+3.8
Rubber tires.....	1	2,449	+2.3	82,768	-29.5
Paper and printing.....	22	2,305	-2.3	69,832	-3.7
Paper products.....	9	414	-9.9	6,264	-5.8
Printing and lithographing.....	13	1,891	-6	63,568	-3.5
Chemicals and allied products.....	13	2,685	+2.0	65,202	+3.0
Fertilizer.....	5	583	+8.9	14,026	+9.5
Other chemicals.....	8	2,102	+3	51,176	+1.3
Stone, clay, and glass products.....	10	1,873	-11.0	40,762	-15.7
Clay products.....	6	717	-14.6	15,162	-18.2
Glass products.....	4	1,156	-8.7	25,600	-14.2
Metal products, other than iron and steel.....	7	2,883	-4.7	66,748	-3.5
Stamped and enameled ware.....	4	844	-13.1	16,144	-10.9
Other metal products.....	3	2,039	+3	50,604	-9
Tobacco products.....	5	367	+8.5	5,062	-10.3
Machinery, not including transportation.....	5	235	-2.5	5,371	+2.5
Transportation equipment (shipbuilding).....	3	702	+7.0	22,909	+36.9
Miscellaneous.....	19	3,353	-2.0	92,068	+3.7
Brushes.....	4	559	-1.4	12,768	+18.4
Mattresses and bed springs.....	4	167	-10.3	4,462	-9.8
Other.....	11	2,627	-1.9	74,838	+2.5
Total, all industries.....	183	32,895	-3.4	1,729,001	-4.3

¹ As given in the report; not the correct sum of the items.

New York

THE following statistics of changes in number of employees and in amount of weekly pay rolls were furnished by the New York State Department of Labor. The figures are based on reports from a fixed list of about 1,600 factories, having in December 467,320 employees, the total of the weekly pay rolls for the middle week of December being \$13,829,516.

CHANGES IN EMPLOYMENT AND PAY ROLLS IN NEW YORK STATE FACTORIES
FROM DECEMBER, 1926, AND NOVEMBER, 1927, TO DECEMBER, 1927

Industry	Per cent of change			
	November, 1927, to December, 1927		December, 1926, to December, 1927	
	Employ- ment	Pay rolls	Employ- ment	Pay rolls
Stone, clay, and glass	-2.1	-2.7	-10.8	-12.6
Miscellaneous stone and minerals	+7	+1.4	-8.9	-6.9
Lime, cement, and plaster	-9.5	-11.6	-20.7	-22.9
Cement	-9.7	-13.5	-18.8	-21.6
Brick, tile, and pottery	-1.0	-1.3	-3.1	-7.3
Brick	-3.2	-12.1	-6.1	-11.6
Pottery	+1.0	+2.4	+2	-4.1
Glass	+1.4	+4	-11.1	-13.3
Metals and machinery	-2.0	+2.7	-8.6	-7.6
Silver and jewelry	-2	-4	-6.7	-4.1
Brass, copper, and aluminum	+4	+9.5	-4.0	-1.6
Iron and steel	+4	+2.8	-5.7	-5.7
Structural and architectural iron	-1.0	-9	+19.8	+17.7
Sheet metal and hardware	-6	+4.6	-5.6	-3.3
Hardware	+1.6	+17.9	+10.9	+11.6
Stamped and enameled ware	-5.6	-8	+3	-1.8
Firearms, tools, and cutlery	+1.8	+6.7	-16.1	-14.2
Cutlery and tools	+8	+2.3	-16.7	-13.0
Cooking, heating, and ventilating apparatus	-11.8	-10.3	-5.2	+5.9
Steam and hot water heating	-13.0	-11.4	-7.9	+4.3
Stoves	-8.0	-11.7	+8.2	-6
Machinery, including electrical apparatus	-1.6	+5.9	-6.9	-6.0
Agricultural implements	+3.4	+12.5	-1.9	+8
Electrical machinery and apparatus	-4.3	+2.1	-1.9	-1.1
Foundries and machine shops	+3	+6.9	-15.6	-14.7
Automobiles, carriages, and airplanes	-5.9	-6.2	-7.1	-10.5
Automobiles and parts	-6.4	-6.9	-7.7	-11.5
Railroad equipment and repair	-2.3	-5	-20.2	-19.6
Locomotives and equipment	-8.7	-7.4	-42.6	-47.2
Railway repair shops	+4	+2.0	-6.6	-3.1
Boat and ship building	+4.3	+6.7	-5.2	-5.6
Instruments and appliances	-2.3	+6.0	-6.3	-4.8
Wood manufactures	-2.7	-9	-10.9	-12.0
Saw and planing mills	-4.6	-4.1	-16.2	-18.1
Millwork	-1.9	-4.1	-15.4	-20.4
Sawmills	-1.5	-2.3	-8.2	-8.1
Furniture and cabinet work	-4	+2.4	-3.9	-3.8
Furniture	-6	+1.8	-1.9	-7
Pianos and other musical instruments	-4.8	-4.3	-18.9	-21.4
Miscellaneous wood, etc.	-2.7	+4	-8.1	-7.1
Furs, leather, and rubber goods	-1.6	-1.0	-5.0	-8.6
Leather	+3.8	+14.1	-14.0	-15.5
Furs and fur goods	-10.4	-21.5	-15.9	-23.2
Shoes	-6	+3.4	-3.7	-7.9
Other leather and canvas goods	-5.7	-12.1	-4.6	-5.6
Rubber and gutta percha	-5.3	-6.4	-10.6	-10.2
Pearl, horn, bone, etc.	+4	+6	+2.1	+1.9
Chemicals, oils, paints, etc.	-1.6	+7	-8	+5
Drugs and chemicals	-1.7	+3	-2.0	+3
Paints and colors	-1.0	+3	-3.0	-1.3
Oil products	-7	+2.7	-1.4	+1
Petroleum refining	-6	+4.5	+1	-1.1
Miscellaneous chemicals	-2.6	-1.3	+1.4	+1.6
Paper	-1.0	+1.2	-3.2	-3
Printing and paper goods	+3	+2.3	-1.0	+7
Paper boxes and tubes	-2.4	-5	-8.9	-7.7
Miscellaneous paper goods	-1.4	+7	-5.6	-9.1
Printing and bookmaking	+1.1	+2.7	+1.0	+2.9
Printing, newspapers	+1.3	+1.0	+8.0	+8.6
Printing, book and job	+1.4	+4.3	-6	+1.4
Textiles	-1.4	-2	-1.4	-1.6
Silk and silk goods	+8	-1	+3.2	+3.5
Wool manufactures	+1.4	+3.5	-6	-1.0
Carpets and rugs	+2.8	+5.2	+5.0	+2.7
Woolens and worsteds	-1.6	+1.7	-19.3	-12.8
Cotton goods	-3.1	-5.0	-2.8	-9.1
Knit goods (except silk)	-6.0	-7.9	-2.7	+7
Other textiles	-8	+3.0	-3.7	-3.9
Dyeing and finishing	-1.0	+5.4	-2.1	-2.1
Clothing and millinery		+4.4	-5.6	-3.6
Men's clothing	+4.2	+14.9	-4.3	-4.7
Men's furnishings	-1.9	-4.1	-6.1	-3.4
Shirts and collars	+3	+3	-5.7	+1.0

CHANGES IN EMPLOYMENT AND PAY ROLLS IN NEW YORK STATE FACTORIES
FROM DECEMBER, 1926, AND NOVEMBER, 1927, TO DECEMBER, 1927—Continued

Industry	Per cent of change			
	November, 1927, to December, 1927		December, 1926, to December, 1927	
	Employ- ment	Pay rolls	Employ- ment	Pay rolls
Clothing and millinery—Continued.				
Women's clothing.....	-1.0	+6.0	-4.9	+9
Women's underwear.....	-3.7	-4.4	-22.7	-20.0
Women's headwear.....	-5.2	-11.6	-6	-5.9
Miscellaneous sewing.....	-3.3	-4.6	-10.5	-8.7
Laundering and cleaning.....	-1.0	-3	+5.7	+7.2
Food and tobacco.....	-5.3	-5.1	-1.6	-1.6
Flour, feed, and cereals.....	-6	+5	-4.8	+3
Flour.....	-9	+1.3	-3.2	+2.4
Canning and preserving.....	-30.6	-20.2	-1.4	-4.6
Other groceries.....	-7.8	-8.2	+6.9	+2.7
Sugar refining.....	-12.4	-12.5	+14.4	+5.0
Meat and dairy products.....	+7	+5	+6	+1.6
Meat packing.....	+1.3	+8	+1.6	+2.9
Bakery products.....	-2.8	-8.2	-5	-4.7
Candy.....	-4.6		-10.8	-7.2
Beverages.....	-5.7	-4.6	-2	+2.2
Tobacco.....	-7.6	-7	-4.8	+2.7
Water, light, and power.....	+7	+1.9		+1.2
Total.....	-1.7	+1.2	-5.6	-5.2

Pennsylvania

THE Bureau of Statistics of the Department of Labor and Industry of Pennsylvania furnished the following report on changes in employment, in weekly man-hours, and in weekly pay-roll totals in Pennsylvania from December, 1927, to January, 1928:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES, IN TOTAL WEEKLY MAN-HOURS, AND IN WEEKLY PAY ROLL IN 464 PENNSYLVANIA ESTABLISHMENTS BETWEEN DECEMBER, 1927, AND JANUARY, 1928

Industry	Number of plants report- ing	Wage earners, week ending Jan. 15, 1928		Total weekly man- hours, week end- ing Jan. 15, 1928		Total weekly pay roll: Per cent of change as com- pared with Decem- ber, 1927
		Number	Per cent of change as com- pared with Decem- ber, 1927	Number	Per cent of change as com- pared with Decem- ber, 1927	
Metal products:						
Blast furnaces.....	8	1,983	-4.3	104,205	-5.5	-5.2
Steel works and rolling mills.....	27	38,540	+3	1,704,908	-1.1	.0
Iron and steel forgings.....	8	1,298	-1.1	59,479	-10.9	-9.8
Structural-iron work.....	5	954	-7	40,567	-8.4	-6.7
Steam and hot-water heating appa- ratus.....	12	2,670	-1.9	114,202	-11.8	-11.9
Foundries.....	34	6,805	-1.3	283,527	-9.1	-9.9
Machinery and parts.....	30	6,884	+8	328,631	-6	-2.1
Electrical apparatus.....	13	3,730	-4.3	154,040	-18.2	-18.7
Engines and pumps.....	9	2,887	+4.1	126,104	+4.0	+3.6
Hardware and tools.....	14	4,364	-9	201,232	+5	-1.3
Brass and bronze products.....	8	633	-2.2	31,888	+2.8	+2.8
Jewelry and novelties.....	3	1,151	-3	56,898	-9	-1.0
Total.....	170	71,899	-3	3,205,681	-3.3	-2.9
Transportation equipment:						
Automobiles.....	6	2,193	-2	105,030	+2.7	-2.7
Automobile bodies and parts.....	9	6,484	+11.1	336,264	+2.7	+3.2
Locomotives and cars.....	9	5,100	-8.0	214,413	-14.2	-15.2
Railroad repair shops.....	5	2,285	-7.1	81,036	-15.4	-21.1
Shipbuilding.....	3	2,141	+1.5	86,351	-6.5	-7.1
Total.....	33	18,203	+3	823,094	-5.1	-6.8

¹ As given in the report.

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES, IN TOTAL WEEKLY MAN-
HOURS, AND IN WEEKLY PAY ROLL IN 464 PENNSYLVANIA ESTABLISHMENTS
BETWEEN DECEMBER, 1927, AND JANUARY, 1928—Continued

Industry	Number of plants reporting	Wage earners, week ending Jan. 15, 1928		Total weekly man-hours, week ending Jan. 15, 1928		Total weekly pay roll: Per cent of change as compared with December, 1927
		Number	Per cent of change as compared with December, 1927	Number	Per cent of change as compared with December, 1927	
Textile products:						
Cotton goods.....	11	1,485	-1	64,486	-13.0	-12.4
Woolens and worsteds.....	9	2,424	+2.5	120,349	+2.3	-2.2
Silk goods.....	20	11,147	+5.0	471,052	-8.1	-7.5
Textile dyeing and finishing.....	5	719	-5.8	34,749	-1.8	-3.5
Carpets and rugs.....	4	1,714	+6	84,533	+7	-8
Hosiery.....	5	1,493	-9.0	70,402	-13.0	-7.9
Knit goods, other.....	8	1,062	-10.5	51,826	-12.5	-13.2
Women's clothing.....	3	297	+9.6	14,092	+8.7	+7.2
Shirts and furnishings.....	3	781	+1.8	37,569	+3.8	-8.4
Total.....	68	21,122	+1.5	949,058	-6.3	-6.6
Foods and tobacco:						
Bread and bakery products.....	16	1,431	-3.6	73,326	-4.2	-3.0
Confectionery.....	5	1,944	-1.7	79,240	-7.9	-8.8
Ice cream.....	7	706	+7.3	41,660	+4.1	+10.2
Meat packing.....	9	1,219	-3.5	62,941	-3.5	-3.0
Cigars and tobacco.....	5	188	+6.2	6,365	-4.4	-2.3
Total.....	42	5,488	-1.3	263,532	-4.0	-2.4
Stone, clay, and glass products:						
Brick, tile, and pottery.....	16	2,648	-4.6	112,170	-8.3	-9.6
Cement.....	7	2,666	-19.1	139,987	-25.3	-24.5
Glass.....	12	3,994	-1.5	150,459	-4.9	-2.5
Total.....	35	9,308	-8.1	402,616	-14.0	-12.5
Lumber products:						
Lumber and planing mills.....	15	971	-6.9	44,898	-4.9	-5.9
Furniture.....	16	1,215	-14.4	57,328	-15.6	-20.2
Wooden boxes.....	4	210	-5.4	7,925	-25.7	-22.1
Total.....	35	2,396	-10.8	110,151	-12.4	-14.7
Chemical products:						
Chemicals and drugs.....	12	826	+9	46,308	-4.0	-4.0
Paints and varnishes.....	6	897	-3.4	38,605	-17.7	-16.7
Total.....	18	1,723	-1.4	84,913	-10.8	-10.7
Leather and rubber products:						
Leather tanning.....	9	2,191	+2.5	110,605	+3.8	+3.2
Shoes.....	10	1,726	+9	86,155	+3.0	+13.2
Leather products, other.....	4	204	+3.0	9,630	+5.1	+6.7
Rubber tires and goods.....	4	968	+3.1	49,050	+2.8	+3.6
Total.....	27	5,089	+2.1	255,440	+3.4	+5.7
Paper and printing:						
Paper and wood pulp.....	8	2,560	-1.8	139,391	-3.0	-4.9
Paper boxes and bags.....	3	182	-13.7	8,265	-23.0	-21.8
Printing and publishing.....	25	1,621	0	73,210	-4.2	-3.0
Total.....	36	4,363	-1.7	220,866	-4.4	-4.6
Grand total, all industries¹.....	464	139,591	-7	6,315,351	-4.8	-4.6
Construction and contracting:						
Buildings.....	16	1,146	-9.8	45,085	-9.2	-7.5
Street and highway.....	4	519	-58.9	20,947	-64.4	-61.5
General.....	7	792	-8.0	35,136	-11.5	-10.5
Total.....	27	2,457	-27.6	101,168	-31.7	-26.2

¹ Not including construction and contracting.

Wisconsin

THE December, 1927, issue of the Wisconsin Labor Market, issued by the State industrial commission, contains the following data showing changes in number of employees and in amount of weekly pay rolls in Wisconsin industries in November, 1927:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN IDENTICAL ESTABLISHMENTS IN WISCONSIN FROM NOVEMBER, 1926, AND OCTOBER, 1927, TO NOVEMBER, 1927

Industry	Per cent of change			
	October, 1927, to November, 1927		November, 1926, to November, 1927	
	Employ- ment	Pay roll	Employ- ment	Pay roll
<i>Manual</i>				
Agriculture.....	-5.0	-2.9	-6.2	-34.2
Logging.....	+6.9	+17.2	+8.5	-4.3
Mining.....	-11.6	-5.8	-12.4	-10.6
Lead and zinc.....	-16.8	-7.4	-16.4	-9.1
Iron.....	+1.0	-2.1	-3.1	-13.7
Stone crushing and quarrying.....	+1.3	-2.1	+43.7	+84.7
Manufacturing.....	-4.2	-4.3	-5.7	-3.8
Stone and allied industries.....	-11.5	-18.8	+7.8	+1.4
Brick, tile, and cement blocks.....	-33.2	-23.9	-15.1	-8.0
Stone finishing.....	-.4	-17.1	+18.8	+4.6
Metal.....	-5.6	-7.6	-13.5	-12.1
Pig iron and rolling-mill products.....	-2.5	-5.2	-28.8	-36.6
Structural-iron work.....	+.5	+2.9	-2.1	-7.4
Foundries and machine shops.....	-11.2	-8.1	-13.6	-14.8
Railroad repair shops.....	+.3	+.1	-2.3	-2.8
Stoves.....	-1.4	-.4	-10.1	-7.7
Aluminum and enamel ware.....	+5.5	+6.6	+5.1	+4.1
Machinery.....	-1.9	-3.2	-6.0	-3.8
Automobiles.....	-16.0	-17.8	-31.6	-22.9
Other metal products.....	-2.8	-19.0	-17.1	-18.1
Wood.....	-4.0	-2.8	-7.9	-4.4
Sawmills and planing mills.....	-8.0	-5.2	-12.0	-9.2
Box factories.....	-8.0	-9.8	-21.5	-22.4
Panel and veneer mills.....	+.6	-6.2	-6.9	-13.0
Furniture.....	+1.7	+4.4	-.2	+1.4
Sash, door, and interior finish.....	-5.5	-5.5	-6.4	-1.0
Other wood products.....	-2.8	+2.5	-8.2	+1.0
Rubber.....	+1.3	+3.8	+38.4	+50.0
Leather.....	-.4	-7.0	-14.8	-18.9
Tanning.....	+7.0	+3.4	-22.2	-22.1
Boots and shoes.....	-7.7	-18.3	-25.9	-32.1
Other leather products.....	+2.9	-.7	+14.9	+15.8
Paper.....	-2.1	+2.4	+.2	+2.8
Paper and pulp mills.....	-1.7	+4.4	+.9	+3.1
Paper boxes.....	-5.4	-9.5	-11.1	-10.9
Other paper products.....	-1.4	+1.9	+7.7	+12.7
Textiles.....	-2.7	-5.7	+8.2	+10.2
Hosiery and other knit goods.....	+2.3	+.8	+9.8	+9.4
Clothing.....	-11.1	-17.6	+8.5	+11.9
Other textile products.....	-2.1	-.4	+1.6	+10.2
Foods.....	-10.1	-3.9	-4.8	-1.2
Meat packing.....	+5.7	+3.8	+10.1	+17.8
Baking and confectionery.....	-2.3	-3.1	+.3	-1.5
Milk products.....	-23.1	-6.9	-27.8	-10.8
Canning and preserving.....	-55.8	-50.8	-9.6	-17.4
Flour mills.....	+5.0	+.4	-5.3	-4.0
Tobacco manufacturing.....	+4.7	+2.7	-1.1	-12.3
Other food products.....	+3.7	+10.6	-10.8	-4.9
Light and power.....	-1.8	-.8	-1.4	-.5
Printing and publishing.....	-2.2	+1.1	+2.0	+9.3
Laundrying, cleaning, and dyeing.....	-3.2	-3.0	+2.4	-.3
Chemical (including soap, glue, and explosives).....	-4.9	-4.1	-4.6	-8.4
Construction:				
Building.....	-5.9	-.4	.0	+22.5
Highway.....	-6.1	-8.2	+12.6	+15.9
Railroad.....	-16.7	-13.0	+9.5	+12.9
Marine, dredging, sewer digging.....	-6.1	-5.5	+94.7	+132.8

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN IDENTICAL ESTABLISHMENTS IN WISCONSIN FROM NOVEMBER, 1926, OCTOBER, 1927, TO NOVEMBER, 1927—Continued

Industry	Per cent of change			
	October, 1927, to November, 1927		November, 1926, to November, 1927	
	Employment	Pay roll	Employment	Pay roll
<i>Manual—Continued</i>				
Communication:				
Steam railways.....	-8.6	-12.6	-1.4	-1.5
Electric railways.....	-1.5	-1.3	-7.4	-3.8
Express, telephone, and telegraph.....	+4.7	+4.3	+17.0	+16.9
Wholesale trade.....	-1.0	-4.4	+7.7	-6.6
Hotels and restaurants.....	-3.0		-5.9	
<i>Nonmanual</i>				
Manufacturing, mines, and quarries.....	+9	+9	+3.9	+5.6
Construction.....	.0	-4.8	+6.1	+8.7
Communication.....	-1.6	-8	-1.3	-7
Wholesale trade.....	-7	+2.4	+3.1	+7.0
Retail trade (sales force only).....	+4.2	+5.2	+6.6	+8.4
Miscellaneous professional services.....	+3.0	+3	+11.0	+2.7
Hotels and restaurants.....	+5		+8.6	

Employment in Indian Mines in 1926

THE report of the chief inspector of mines in British India for the year ending December 31, 1926, shows that during that year the daily average number of persons employed in and about the mines under his supervision was 260,113, a decrease of 6,256, or 2.46 per cent, from the daily average of the preceding year. The distribution of these workers as to sex was as follows:

	Male	Female	Total
Underground.....	86,343	31,889	118,232
In open workings.....	43,306	27,833	71,139
Surface.....	51,967	18,775	70,742
Total.....	181,616	78,497	260,113

Of the women who worked underground, the great majority, 28,496, were employed in coal mines, 2,850 were employed in the mining of mica, 223 in salt mines, and 215 in manganese mines; no other form of mining employed as many as 60 underground.

During the year there were 198 fatal accidents in the mines, involving the loss of 227 lives, and 507 serious accidents, involving injuries to 540 persons. The death and accident rates are as follows:

DEATH AND ACCIDENT RATES IN INDIAN MINES, 1926

Place where employed	Death rate per 1,000 persons employed		Serious injury rate per 1,000 persons employed	
	Males	Females	Males	Females
Underground.....	1.55	0.91	3.44	1.57
Open workings.....	.76	.07	1.27	.79
Surface.....	.44	.32	1.92	.96

Five of the fatalities were due to explosions of gas, 53 to falls of roof, 69 to falls of side, 17 occurred in shafts, 2 were due to suffocation by gases, 17 to explosives, 26 to haulage accidents, 12 to other accidents underground, and 26 on the surface. The great majority of the fatalities, 171, or 86.4 per cent, occurred in connection with coal mining. The accident rate is not given for the different classes of mines, but since only 65.6 per cent of the workers were employed in coal mining, it seems to be disproportionately dangerous.

Retail Prices of Food in the United States

The following table is compiled from monthly reports of the Bureau of Labor Statistics, and is based on the prices of food in the United States for the years 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, and 1926. The prices are given in cents per pound for the most common foodstuffs. The prices for 1917 are taken as the base prices, and are set equal to 100. The prices for the other years are given as percentages of the 1917 prices. The prices for 1926 are given in parentheses. The prices for 1926 are given in parentheses.

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WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices¹ received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food January 15 and December 15, 1927, and January 15, 1928, as well as the percentage changes in the year and in the month. For example, the retail price per dozen of strictly fresh eggs was 55.9 cents on January 15, 1927; 59.6 cents on December 15, 1927; and 56 cents on January 15, 1928. These figures show an increase of two-tenths of 1 per cent in the year and a decrease of 6 per cent in the month.

The cost of the various articles of food combined shows a decrease of 2.7 per cent January 15, 1928, as compared with January 15, 1927, and a decrease of 0.6 per cent January 15, 1928, as compared with December 15, 1927.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JANUARY 15, 1928, COMPARED WITH DECEMBER 15, 1927, AND JANUARY 15, 1927

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) Jan. 15, 1928 compared with—	
		Jan. 15, 1927	Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1927	Dec. 15, 1927
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Sirloin steak.....	Pound.....	40.8	43.9	44.4	+9	+1
Round steak.....	do.....	35.3	38.2	38.6	+9	+1
Rib roast.....	do.....	30.3	32.4	32.7	+8	+1
Chuck roast.....	do.....	22.7	25.1	25.4	+12	+1
Plate beef.....	do.....	15.0	16.7	17.2	+15	+3
Pork chops.....	do.....	36.6	32.8	31.3	-14	-5
Bacon.....	do.....	48.9	45.3	44.6	-9	-2
Ham.....	do.....	56.8	51.9	51.8	-9	-0.2
Lamb, leg of.....	do.....	37.4	37.5	37.4	0	-0.3
Hens.....	do.....	38.5	35.7	36.8	-4	+3
Salmon, canned.....	do.....	33.5	35.0	35.3	+5	+1
Milk, fresh.....	Quart.....	14.1	14.3	14.3	+1	0
Milk, evaporated.....	15-16 oz. can.....	11.4	11.5	11.5	+1	0
Butter.....	Pound.....	58.4	58.4	57.8	-1	-1
Oleomargarine (all butter substitute).....	do.....	29.2	27.9	27.3	-5	-1
Cheese.....	do.....	37.6	39.0	39.3	+5	+1
Lard.....	do.....	20.0	19.2	18.9	-6	-2
Vegetable lard substitute.....	do.....	25.2	25.2	25.0	-1	-1
Eggs, strictly fresh.....	Dozen.....	55.9	59.6	56.0	+0.2	-6
Eggs, storage.....	do.....	45.0	42.9	44.7	-1	+4

¹ In addition to monthly retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JANUARY 15, 1928, COMPARED WITH DECEMBER 15, 1927, AND JANUARY 15, 1927—Continued

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (—) Jan. 15, 1928 compared with—	
		Jan. 15, 1927	Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1927	Dec. 15, 1927
		Cents	Cents	Cents		
Bread.....	Pound.....	9.4	9.2	9.2	-2	0
Flour.....	do.....	5.6	5.4	5.3	-5	-2
Corn meal.....	do.....	5.1	5.2	5.2	+2	0
Roll'd oats.....	do.....	9.1	9.0	9.0	-1	0
Corn flakes.....	8-oz. pkg.....	10.9	9.7	9.7	-11	0
Wheat cereal.....	28-oz. pkg.....	25.5	25.5	25.7	+1	+1
Macaroni.....	Pound.....	20.1	20.0	20.0	-0.4	0
Rice.....	do.....	11.0	10.3	10.2	-7	-1
Beans, navy.....	do.....	9.2	9.5	9.5	+3	0
Potatoes.....	do.....	4.0	3.0	3.0	-25	0
Onions.....	do.....	5.5	4.7	5.1	-7	+9
Cabbage.....	do.....	4.7	3.8	4.2	-11	+11
Beans, baked.....	No. 2 can.....	11.7	11.4	11.4	-3	0
Corn, canned.....	do.....	16.1	15.7	15.8	-2	+1
Peas, canned.....	do.....	17.2	16.7	16.8	-2	+1
Tomatoes, canned.....	do.....	12.3	11.8	11.7	-5	-1
Sugar.....	Pound.....	7.5	7.1	7.1	-5	0
Tea.....	do.....	77.5	77.3	77.4	-0.1	+0.1
Coffee.....	do.....	50.2	48.1	48.5	-3	+1
Prunes.....	do.....	16.0	13.8	13.6	-15	-1
Raisins.....	do.....	14.4	13.7	13.7	-5	0
Bananas.....	Dozen.....	34.5	34.8	34.6	+0.3	-1
Oranges.....	do.....	46.9	52.3	51.0	+9	-2
Weighted food index.....					-2.7	-0.6

Table 2 shows for the United States average retail prices of specified food articles on January 15, 1913, and on January 15 of each year from 1922 to 1928, together with percentage changes in January of each of these specified years, compared with January, 1913. For example, the retail price per pound of flour was 3.3 cents in January, 1913; 4.9 cents in January, 1922 and 1923; 4.5 cents in January, 1924; 6 cents in January, 1925; 6.2 cents in January, 1926; 5.6 cents in January, 1927; and 5.3 cents in January, 1928.

As compared with January, 1913, these figures show increases of 48 per cent in January, 1922 and 1923; 36 per cent in January, 1924; 82 per cent in January, 1925; 88 per cent in January, 1926; 70 per cent in January, 1927; and 61 per cent in January, 1928.

The cost of the various articles of food combined showed an increase of 57.8 per cent in January, 1928, as compared with January, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE JANUARY 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH JANUARY 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on Jan. 15—								Per cent of increase, Jan. 15 of each specified year compared with Jan. 15, 1913							
		1913	1922	1923	1924	1925	1926	1927	1928	1922	1923	1924	1925	1926	1927	1928	
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak	Pound	23.8	35.3	37.2	39.1	38.7	40.8	40.8	44.4	48	56	64	63	71	71	87	
Round steak	do	20.5	30.4	31.6	33.3	32.8	35.0	35.3	38.6	48	54	62	60	71	72	88	
Rib roast	do	18.8	26.7	27.5	28.6	28.5	30.0	30.3	32.7	42	46	52	52	60	61	74	
Chuck roast	do	14.9	19.0	19.6	20.7	20.5	22.1	22.7	25.4	28	32	39	38	48	52	70	
Plate beef	do	11.1	12.8	12.9	13.3	13.3	14.5	15.0	17.2	15	16	20	20	31	35	55	
Pork chops	do	18.7	28.9	29.3	27.4	30.7	36.5	36.6	31.3	55	57	47	64	95	96	67	
Bacon	do	25.4	37.0	39.8	37.2	40.3	48.2	48.9	44.6	48	57	46	59	90	93	76	
Ham	do	25.1	44.2	45.1	44.7	47.6	53.3	56.8	51.8	76	80	78	90	112	126	106	
Lamb, leg of	do	18.0	33.9	36.3	35.9	38.8	39.1	37.4	37.4	88	102	99	116	117	108	108	
Hens	do	20.2	36.9	34.5	34.5	35.8	38.6	38.5	36.8	83	71	71	77	91	91	82	
Salmon, canned, red	do		33.3	31.3	31.2	31.7	37.3	33.5	35.3								
Milk, fresh	Quart	8.9	13.6	13.7	14.2	13.9	14.2	14.1	14.3	53	54	60	56	60	58	61	
Milk, evaporated	(1)	12.4	12.1	12.2	11.1	11.6	11.4	11.5									
Butter	Pound	40.9	45.3	59.1	61.3	52.3	55.4	58.4	57.8	11	44	50	28	35	43	41	
Oleomargarine (all butter substitutes)	do		28.7	27.8	29.7	30.1	31.3	29.2	27.6								
Cheese	do	22.2	32.9	37.3	37.4	35.9	37.6	37.6	39.3	48	68	68	62	69	69	77	
Lard	do	15.4	15.4	17.4	18.7	22.8	22.3	20.0	18.9	0	13	21	48	45	30	23	
Vegetable lard substitute	do	21.6	22.3	24.3	25.3	25.3	25.6	25.2	25.0								
Eggs, strictly fresh	Dozen	37.3	49.9	55.7	54.6	70.5	53.9	55.9	56.0	34	49	46	89	45	50	50	
Eggs, storage	do	25.7	39.3	40.0	38.6	53.7	42.2	45.0	44.7	53	56	50	109	64	75	74	
Bread	Pound	5.6	8.8	8.7	8.7	9.2	9.4	9.4	9.2	57	55	55	64	68	68	64	
Flour	do	3.3	4.9	4.9	4.5	6.0	6.2	5.6	5.3	48	48	36	82	88	70	61	
Corn meal	do	3.0	3.9	4.0	4.4	5.4	5.2	5.1	5.2	30	33	47	80	73	70	73	
Rolled oats	do		9.2	8.8	8.8	9.0	9.1	9.1	9.0								
Corn flakes	(2)		10.7	9.7	9.7	10.9	11.0	10.9	9.7								
Wheat cereal	(3)		26.6	25.0	24.3	24.5	25.3	25.5	25.7								
Macaroni	Pound		20.3	19.8	19.6	20.0	20.3	20.1	20.0								
Rice	do	8.6	9.3	9.5	9.8	10.7	11.6	11.0	10.2	8	10	14	24	35	28	19	
Beans, navy	do		8.2	10.9	10.1	10.2	9.8	9.2	9.5								
Potatoes	do	1.6	3.3	2.1	2.8	2.5	5.8	4.0	3.0	106	31	75	56	263	150	88	
Onions	do		9.1	5.1	6.1	5.9	5.9	5.5	5.1								
Cabbage	do		5.6	4.0	4.9	4.6	5.6	4.7	4.2								
Beans, baked	(4)		13.5	13.1	12.9	12.5	12.3	11.7	11.4								
Corn, canned	(4)		16.0	15.3	15.7	17.5	16.8	16.1	15.8								
Peas, canned	(4)		17.7	17.5	17.9	18.5	17.8	17.2	16.8								
Tomatoes, canned	(4)		13.2	12.7	12.9	13.8	12.6	12.3	11.7								
Sugar, granulated	Pound	5.8	6.2	8.3	10.2	8.1	6.7	7.5	7.1	7	43	76	40	16	29	22	
Tea	do	54.3	68.3	68.7	71.0	74.2	76.1	77.5	77.4	26	27	31	37	40	43	43	
Coffee	do	29.9	35.7	37.0	38.2	51.6	51.3	50.2	48.5	19	24	28	73	72	68	62	
Prunes	do		18.8	20.0	17.9	17.4	17.2	16.0	13.6								
Raisins	do		25.0	18.9	15.9	14.6	14.5	14.4	13.7								
Bananas	Dozen		36.6	37.1	38.8	33.2	35.8	34.5	34.6								
Oranges	do		46.2	46.8	40.0	44.8	46.9	46.9	51.0								
Weighted food index ⁵										44.5	46.9	51.7	57.1	67.2	62.1	57.8	

¹15-16 ounce can.²8-ounce package.³28-ounce package.⁴No. 2 can.

⁵ Beginning with January, 1921, the index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Index Numbers of Retail Prices of Food in the United States

IN TABLE 3 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1927,² and by months for 1927, and for January, 1928. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1926 was 162.6, which means that the average money price for the year 1926 was 62.6 per cent higher than the average money price for the year 1913. As compared with the relative price, 159.8 in 1925, the figures for 1926 show an increase of nearly three points, but an increase of 1.75 per cent in the year.

In the last column of Table 3 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100 are 155.9 for December, 1927, and 155.1 for January, 1928.

The curve shown in the chart on page 169 pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

² For index numbers of each month, January, 1913, to December, 1926, see Bulletin No. 306, pp. 44-61; Bulletin No. 418, pp. 38-51; and Bulletin No. 445, pp. 36-49.

TABLE 3.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD,
BY YEARS, 1913, 1920 TO 1927, AND BY MONTHS FOR 1927 AND 1928

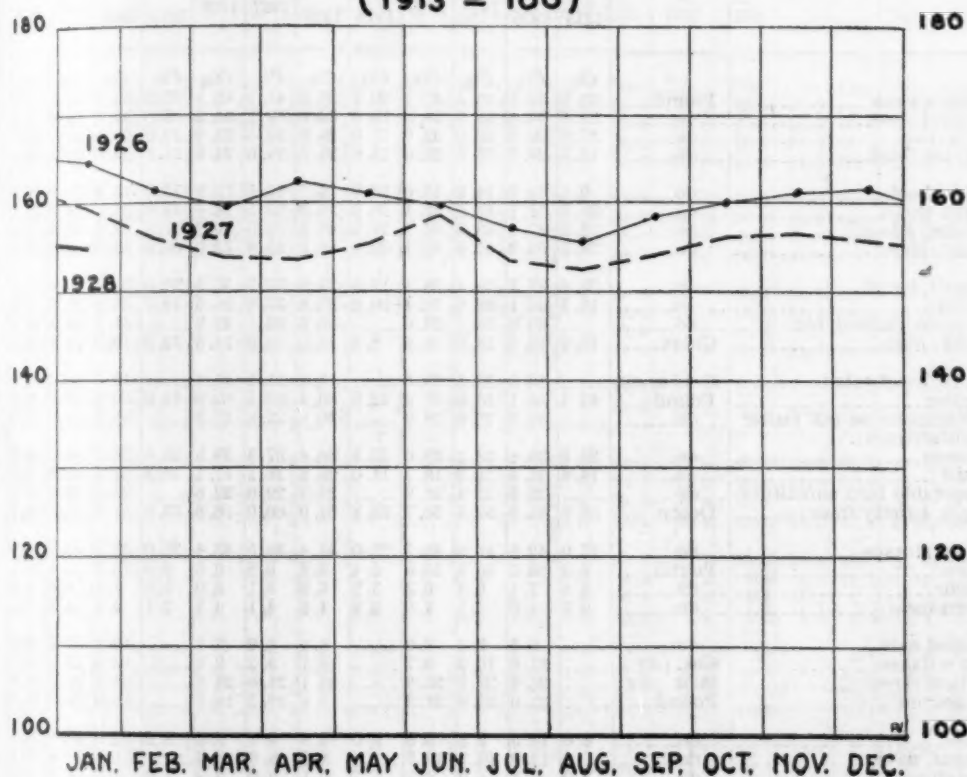
[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bac- con	Ham	Hens	Milk	But- ter	Cheese
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.0
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	156.7
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1927: January	160.6	158.3	153.0	141.9	124.0	174.3	181.1	211.2	180.8	158.4	152.5	170.1
February	161.0	158.7	153.5	141.9	123.1	171.0	179.6	210.8	180.8	158.4	153.5	170.1
March	161.8	159.6	153.5	142.5	123.1	174.3	179.3	210.0	181.7	158.4	154.6	168.8
April	164.6	163.2	156.1	145.6	125.6	175.7	178.2	210.8	182.6	157.3	152.5	167.9
May	166.5	165.5	157.6	146.9	125.6	173.3	176.3	209.3	180.3	156.2	139.4	167.4
June	166.9	165.9	157.1	146.9	125.6	165.2	174.4	206.3	170.4	156.2	135.2	167.4
July	171.7	170.0	160.1	149.4	126.4	166.2	172.6	203.0	167.1	157.3	134.2	167.0
August	172.0	170.9	160.1	149.4	126.4	179.5	172.2	201.9	166.2	158.4	134.2	167.4
September	172.4	170.9	160.6	150.0	128.1	193.8	172.2	200.0	166.2	158.4	139.4	170.6
October	172.0	170.0	161.1	151.9	130.6	197.6	172.6	199.3	167.6	159.6	145.4	173.3
November	171.3	169.5	161.1	153.1	133.9	172.9	171.5	197.0	167.1	159.6	147.3	174.7
December	172.8	171.3	163.6	156.9	138.0	156.2	167.8	192.9	167.6	160.7	152.5	176.5
1928: January	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.6	172.8	160.7	150.9	177.8

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota- toes	Sugar	Tea	Coffee	All arti- cles ¹
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1927: January	126.6	162.0	167.9	169.7	170.0	126.4	235.3	136.4	142.5	168.5	159.3
February	124.1	128.1	167.9	169.7	170.0	124.1	223.5	136.4	142.3	167.4	156.0
March	122.8	102.6	167.9	166.7	170.0	124.1	217.6	134.5	142.6	165.4	153.8
April	120.9	98.3	167.9	166.7	170.0	123.0	217.6	132.7	142.6	163.8	153.6
May	120.3	97.4	167.9	166.7	170.0	121.8	264.7	132.7	142.3	161.7	155.4
June	119.0	97.1	166.1	166.7	173.3	123.0	352.9	132.7	142.1	160.7	158.5
July	119.0	107.0	166.1	166.7	173.3	123.0	247.1	134.5	142.5	159.7	153.4
August	119.6	121.7	166.1	169.7	173.3	123.0	200.0	132.7	142.6	159.1	152.4
September	121.5	141.2	166.1	166.7	173.3	121.8	188.2	130.9	141.9	158.7	154.0
October	124.1	164.1	166.1	166.7	173.3	120.7	176.5	130.9	142.5	159.1	156.1
November	123.4	178.8	166.1	163.6	173.3	119.5	176.5	130.9	142.5	160.4	156.5
December	121.5	172.8	164.3	163.6	173.3	118.4	176.5	129.1	142.1	161.4	155.9
1928: January	119.6	162.3	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1

¹ 22 articles in 1913-1920; 43 articles in 1921-1927.

TREND OF RETAIL PRICES OF FOOD. (1913 = 100)



Retail Prices of Food in 51

AVERAGE retail food prices are shown in Table 4 for 39 cities January 15, 1928. For 12 other cities prices are shown for the same not scheduled by the bureau until after 1913.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL
[Exact comparisons of prices in different cities can not be made for some articles,

Article	Unit	Atlanta, Ga.				Baltimore, Md.				Birmingham, Ala.			
		Jan 15—		Dec.	Jan.	Jan. 15—		Dec.	Jan.	Jan. 15—		Dec.	Jan.
		1913	1926	15, 1927	15, 1928	1913	1926	15, 1927	15, 1928	1913	1926	15, 1927	15, 1928
Sirloin steak	Pound	Cts. 23.0	Cts. 38.6	Cts. 43.5	Cts. 42.1	Cts. 20.7	Cts. 38.3	Cts. 41.5	Cts. 42.3	Cts. 25.0	Cts. 39.7	Cts. 42.5	Cts. 42.5
Round steak	do	20.5	34.6	38.5	38.3	19.0	34.6	38.3	39.3	19.6	34.7	36.8	36.8
Rib roast	do	17.5	29.6	33.0	32.6	17.0	29.9	32.5	33.2	19.9	28.4	30.4	30.7
Chuck roast	do	13.5	21.5	25.5	25.6	15.0	21.6	24.6	24.8	15.1	22.7	23.3	23.9
Plate beef	do	9.8	13.2	14.9	15.6	10.8	14.7	17.5	17.3	10.0	13.8	15.3	15.3
Pork chops	do	21.0	36.1	33.8	31.1	18.0	36.0	30.5	28.6	19.4	36.3	34.4	31.4
Bacon, sliced	do	32.0	47.4	43.9	44.2	21.3	42.5	40.0	39.7	31.3	48.8	45.3	44.0
Ham, sliced	do	28.5	54.3	52.9	52.1	29.0	56.5	53.8	52.0	30.0	53.3	53.0	51.3
Lamb, leg of	do	20.0	37.1	39.4	38.3	17.3	39.6	37.7	37.3	20.0	38.6	40.9	39.8
Hens	do	19.5	38.1	36.8	36.4	20.0	39.8	37.8	38.5	18.7	35.8	33.5	33.2
Salmon, canned, red	do	39.8	34.5	34.6	34.6	36.3	33.1	32.9	32.9	41.1	36.3	36.8	36.8
Milk, fresh	Quart	10.0	19.3	18.0	18.0	8.8	13.0	14.0	14.0	10.3	19.0	18.3	18.7
Milk, evaporated	15-16 oz. can	13.5	13.5	13.5	13.5	11.3	11.5	11.4	11.4	12.6	12.4	12.3	12.3
Butter	Pound	42.4	58.1	58.0	57.8	42.8	60.4	62.5	62.9	44.0	60.8	59.0	58.4
Oleomargarine (all butter substitutes)	do	32.8	26.9	26.9	26.9	30.6	27.8	27.3	27.3	36.8	32.0	32.2	32.2
Cheese	do	25.0	36.4	38.2	38.0	23.3	36.4	37.3	38.3	23.0	38.1	39.6	39.3
Lard	do	14.8	21.4	19.2	18.7	14.0	20.3	18.1	17.1	15.3	22.9	18.9	18.5
Vegetable lard substitute	do	23.3	22.4	21.9	21.9	24.3	22.6	22.8	22.8	22.0	22.0	20.5	20.5
Eggs, strictly fresh	Dozen	30.6	55.6	59.5	56.7	33.8	54.0	60.0	56.6	33.8	57.6	57.3	58.7
Eggs, storage	do	25.0	42.8	46.0	46.5	25.0	41.4	39.5	43.4	25.0	46.9	42.6	45.3
Bread	Pound	6.0	10.3	10.8	10.8	5.4	9.4	9.8	9.6	6.4	10.3	10.4	10.1
Flour	do	3.6	7.1	6.4	6.3	3.2	5.9	5.1	5.0	3.8	7.1	6.6	6.6
Corn meal	do	2.4	4.0	4.1	4.0	2.6	4.0	4.1	4.1	2.1	4.3	4.2	4.1
Rolled oats	do	9.5	9.6	9.9	9.9	8.4	8.2	8.1	8.1	10.1	10.2	10.0	10.0
Corn flakes	8-oz. pkg.	11.6	10.0	9.7	9.7	10.1	9.2	9.1	9.1	12.2	10.5	10.1	10.1
Wheat cereal	28-oz. pkg.	26.4	27.1	26.6	26.6	24.1	24.6	24.8	24.8	26.3	27.6	27.4	27.4
Macaroni	Pound	22.0	21.6	21.3	21.3	19.4	19.2	19.1	19.1	19.0	18.9	18.4	18.4
Rice	do	8.6	11.5	9.3	9.0	9.0	10.8	9.7	9.5	8.2	12.1	10.4	10.1
Beans, navy	do	11.0	10.7	10.3	10.3	8.7	8.6	8.9	8.9	11.5	10.4	10.3	10.3
Potatoes	do	2.0	7.3	4.0	4.1	1.7	6.1	2.9	2.9	1.9	6.7	4.4	4.3
Onions	do	8.1	6.7	6.9	6.9	5.7	4.2	5.0	5.0	7.9	6.7	6.7	6.7
Cabbage	do	7.9	4.7	5.3	5.3	6.4	3.4	3.6	3.6	6.7	5.2	5.3	5.3
Beans, baked	No. 2 can	12.3	11.0	11.0	11.0	10.8	10.8	10.9	10.9	12.7	11.8	11.2	11.2
Corn, canned	do	17.7	17.7	17.5	17.5	15.5	15.5	14.8	14.8	18.1	16.6	16.7	16.7
Peas, canned	do	19.8	19.7	18.9	18.9	15.8	14.8	14.7	14.7	21.8	20.8	20.6	20.6
Tomatoes, canned	do	11.9	10.8	10.3	10.3	10.6	10.4	10.2	10.2	11.9	11.0	10.4	10.4
Sugar, granulated	Pound	6.1	7.2	7.5	7.4	5.1	6.0	6.4	6.5	5.7	7.3	7.5	7.4
Tea	do	60.0	103.5	103.3	105.9	56.0	73.0	71.6	72.5	61.3	92.4	98.8	98.5
Coffee	do	32.0	51.0	48.6	48.9	25.2	48.4	44.2	44.2	28.8	54.1	51.1	50.7
Prunes	do	17.4	14.3	13.7	13.7	15.0	11.7	11.2	11.2	19.3	17.1	16.2	16.2
Raisins	do	15.7	15.3	15.4	15.4	13.5	12.7	12.7	12.7	15.4	15.0	15.0	15.0
Bananas	Dozen	28.6	28.2	28.1	28.1	25.1	26.3	25.1	25.1	39.7	37.7	38.2	38.2
Oranges	do	38.2	38.1	41.8	41.8	46.2	44.2	49.4	49.4	44.0	46.8	47.4	47.4

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

Cities on Specified Dates

for January 15, 1913, and 1926, and for December 15, 1927, and Jan-
dates with the exception of January 15, 1913, as these cities were

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES

particularly meats and vegetables, owing to differences in trad- , ractices]

Boston, Mass.				Bridgeport, Conn.				Buffalo, N. Y.				Butte, Mont.				Charleston, S. C.					
Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1926
1913	1926						1913	1926						1913	1926						
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
135.2	165.1	174.4	172.9	49.0	55.4	54.5	20.3	40.5	43.2	44.3	30.4	33.2	33.2	21.2	32.5	32.5	33.0	32.5	32.5	33.0	33.0
32.0	52.4	55.3	56.1	41.5	47.8	47.5	18.3	35.0	36.9	37.7	25.8	29.8	30.6	20.0	30.5	29.7	30.0	30.5	29.7	30.0	30.0
23.4	39.8	41.6	42.4	36.9	41.8	41.2	17.0	29.6	32.7	33.3	26.2	27.9	28.7	19.4	27.0	26.3	27.3	27.0	26.3	27.3	27.3
16.3	28.0	32.0	29.6	27.5	32.1	31.8	14.7	22.9	26.0	26.8	18.3	20.4	21.3	14.5	20.2	20.3	20.2	20.3	20.3	20.2	20.2
20.2	21.8	21.8	12.0	13.6	13.0	10.7	14.0	16.3	16.7	12.3	13.8	14.4	11.4	14.7	14.6	15.0	15.0	14.7	14.6	15.0	15.0
20.0	39.2	34.6	31.8	37.8	33.9	33.2	18.0	40.0	34.3	33.0	34.8	32.7	31.8	22.8	34.8	32.0	31.0	34.8	32.0	31.0	31.0
24.4	47.4	44.8	43.2	52.4	49.7	49.0	20.3	45.1	40.3	39.8	56.4	51.7	52.9	23.3	43.5	37.9	37.7	43.5	37.9	37.7	37.7
26.3	57.7	57.9	56.4	57.3	55.7	55.4	24.0	51.5	48.2	48.6	58.8	57.9	56.3	26.0	48.2	46.1	46.1	48.2	46.1	46.1	46.1
21.3	40.8	38.1	37.5	40.1	37.8	36.7	17.5	36.1	33.1	33.3	35.4	35.7	35.7	20.0	42.5	39.4	38.8	42.5	39.4	38.8	38.8
22.0	41.8	38.9	39.5	41.6	39.8	39.5	19.0	41.9	37.5	39.1	34.9	31.5	34.4	21.2	36.4	35.5	35.8	34.4	35.5	35.8	35.8
36.8	34.5	35.6	34.0	32.3	32.9	32.9	38.6	34.1	34.5	29.9	32.7	32.4	32.4	11.7	38.3	33.4	34.2	32.4	33.4	34.2	34.2
8.9	14.9	16.5	16.0	16.0	16.0	16.0	8.0	13.2	13.0	13.0	14.3	14.0	14.0	11.1	18.0	19.0	19.0	14.0	19.0	19.0	19.0
12.3	12.1	12.0	11.6	11.6	11.6	11.6	11.4	11.3	11.4	11.3	11.3	11.1	11.1	11.1	11.8	11.8	11.9	11.1	11.8	11.9	11.9
38.5	57.6	58.6	58.7	57.7	57.6	57.4	40.2	56.4	59.9	58.6	53.2	55.6	55.5	40.2	56.5	53.9	54.9	55.5	53.9	54.9	54.9
31.3	28.3	28.3	30.1	26.8	26.8	26.8	30.4	28.1	27.7	27.7	27.7	27.7	27.7	27.7	31.8	29.2	29.2	27.7	29.2	29.2	29.2
23.1	39.8	40.6	40.8	40.1	42.9	42.8	21.5	38.0	39.2	39.3	36.7	37.5	37.3	20.5	35.0	37.1	37.4	37.3	37.1	37.4	37.4
15.4	22.4	19.0	18.9	21.3	18.4	18.2	14.1	21.1	18.6	18.0	25.2	23.2	22.8	13.9	22.6	20.7	20.1	22.8	20.7	20.1	20.1
25.3	25.3	25.3	25.3	25.5	25.4	25.5	26.5	25.8	25.8	25.8	29.3	30.3	30.6	21.2	24.0	21.9	21.6	30.6	21.9	21.6	21.6
41.0	65.8	81.7	69.8	70.7	80.3	72.3	37.7	57.2	63.8	55.6	59.1	61.9	59.9	32.5	57.6	57.3	54.4	59.9	57.6	57.3	54.4
26.4	47.3	50.6	50.6	46.5	46.4	48.7	23.3	43.6	43.4	43.6	35.8	36.7	38.6	24.8	43.7	39.2	40.6	38.6	39.2	40.6	40.6
5.9	9.1	8.6	8.6	9.0	8.8	8.8	5.6	9.0	8.7	8.7	9.8	9.8	9.8	9.8	10.8	10.9	10.9	9.8	10.9	10.9	10.9
3.7	6.9	5.9	5.8	6.2	5.6	5.5	2.9	5.8	4.8	4.8	6.1	5.3	5.3	3.7	7.5	6.8	6.8	5.3	6.8	6.8	6.8
3.5	6.6	6.7	6.5	7.9	7.7	7.3	2.5	5.3	5.2	5.1	6.0	6.3	6.2	2.3	4.0	3.9	3.9	6.2	3.9	3.9	3.9
9.1	9.0	9.0	8.8	8.4	8.3	8.3	8.7	8.8	8.8	7.2	7.2	7.6	7.8	9.5	9.6	9.5	9.5	7.8	9.6	9.5	9.5
11.0	9.8	9.8	10.5	9.6	9.6	9.6	10.5	9.4	9.4	12.4	10.5	10.5	10.5	11.7	9.9	9.9	9.9	10.5	9.9	9.9	9.9
25.1	24.9	24.9	24.6	24.6	24.7	24.7	24.5	24.8	24.8	28.1	28.5	28.5	28.5	26.6	25.7	25.7	25.7	28.1	25.7	25.7	25.7
23.2	22.3	22.4	22.9	22.5	22.4	22.4	21.7	21.5	21.4	19.5	19.7	19.0	19.0	19.0	18.9	18.5	18.5	19.0	18.9	18.5	18.5
9.2	12.6	12.1	11.9	11.5	11.1	10.9	9.3	11.5	9.9	10.0	12.2	11.0	10.7	5.5	9.5	6.9	7.2	10.7	6.9	7.2	7.2
10.8	10.3	10.0	10.1	9.5	9.7	9.7	9.9	9.3	9.3	9.3	10.6	9.9	10.1	10.1	10.5	10.1	10.1	10.6	10.1	10.1	10.1
1.7	6.1	3.0	2.9	5.9	3.0	3.0	1.4	5.7	2.8	2.8	3.7	1.6	1.7	2.0	6.8	3.4	3.3	1.7	3.4	3.3	3.3
6.4	4.6	5.4	5.9	5.2	5.2	5.2	6.8	5.4	5.6	4.6	4.6	4.2	4.8	6.6	5.3	5.9	5.9	4.8	5.3	5.9	5.9
6.2	4.4	5.2	5.7	3.9	5.2	5.2	4.7	3.0	3.2	4.2	4.2	4.1	6.2	6.6	4.1	4.1	4.1	6.2	4.1	4.1	4.1
13.9	13.3	12.6	11.5	11.7	11.5	11.5	10.3	10.0	9.9	14.8	13.4	13.5	13.5	10.2	9.9	9.8	9.8	13.4	9.9	9.8	9.8
19.8	17.6	17.4	20.0	19.2	19.1	19.1	16.1	16.0	15.6	16.4	14.6	14.6	14.6	16.0	14.2	14.9	14.9	16.4	14.2	14.9	14.9
21.0	19.9	19.9	21.7	20.9	21.0	21.0	16.3	16.2	15.7	15.8	13.5	13.5	14.1	17.9	16.4	16.2	16.2	13.5	16.4	16.2	16.2
12.7	11.3	11.8	12.7	13.1	13.4	13.4	13.9	13.1	12.8	14.7	12.8	12.8	12.8	10.4	9.8	9.8	9.8	12.8	9.8	9.8	9.8
5.8	6.6	7.1	7.2	6.2	7.0	6.9	5.5	6.4	6.8	6.8	7.7	8.6	8.7	6.5	6.7	6.7	6.7	8.6	6.7	6.7	6.7
58.6	77.4	72.4	72.5	61.3	60.9	63.2	45.0	69.2	69.0	66.6	83.8	83.1	81.6	75.3	82.4	80.7	80.7	83.8	82.4	80.7	80.7
33.0	56.0	52.8	52.5	48.6	47.5	47.2	29.3	49.9	45.7	46.3	56.8	54.1	54.2	26.0	46.1	43.8	43.8	54.2	43.8	43.8	43.8
17.6	13.7	13.6	16.5	15.3	14.5	14.5	16.7	13.5	13.2	18.0	14.8	14.8	14.2	16.6	10.7	10.8	10.8	14.8	10.7	10.8	10.8
14.0	12.7	12.7	13.9	14.0	14.1	14.1	14.1	13.0	12.9	14.9	14.6	14.6	14.6	14.3	12.8	12.9	12.9	14.6	12.8	12.9	12.9
45.9	47.0	48.0	36.7	37.1	38.3	38.3	45.0	43.3	42.9	15.1	12.8	13.8	13.8	34.3	27.5	23.2	23.2	12.8	27.5	23.2	23.2
52.2	56.1	54.5	52.5	61.7	60.1	60.1	51.1	59.0	57.1	48.5	58.8	54.0	54.0	31.0	31.3	32.5	32.5	54.0	31.3	32.5	32.5

¹ Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL

Article	Unit	Chicago, Ill.				Cincinnati, Ohio				Cleveland, Ohio			
		Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928
		1913	1926			1913	1926			1913	1926		
Sirloin steak	Pound	Cts. 21.0	Cts. 44.1	Cts. 49.1	Cts. 48.2	Cts. 21.0	Cts. 36.9	Cts. 40.2	Cts. 41.1	Cts. 22.3	Cts. 37.0	Cts. 42.7	Cts. 42.6
Round steak	do	18.2	34.7	39.1	38.8	18.8	33.2	36.6	37.1	18.8	31.0	36.3	36.0
Rib roast	do	18.2	34.7	37.4	37.3	18.3	29.7	32.6	33.3	17.8	26.9	29.7	30.2
Chuck roast	do	14.3	24.8	28.3	28.6	13.6	20.7	24.0	24.3	14.7	22.2	25.9	26.4
Plate beef	do	10.9	14.5	16.3	17.3	10.0	15.1	17.4	18.4	10.4	13.5	16.1	16.3
Pork chops	do	16.0	33.8	31.1	28.8	18.6	34.7	26.9	26.8	17.5	36.8	31.4	30.6
Bacon, sliced	do	31.3	51.9	49.4	49.0	22.4	41.7	39.1	38.5	23.9	49.3	43.7	43.2
Ham, sliced	do	30.8	52.5	53.4	52.5	25.3	52.5	50.2	50.6	32.0	55.8	51.8	51.9
Lamb, leg of	do	18.7	39.0	37.7	37.4	16.2	36.4	35.4	37.5	17.3	37.4	35.2	35.8
Hens	do	17.4	39.0	36.1	37.4	21.6	39.3	36.8	38.2	19.3	43.0	35.3	39.4
Salmon, canned, red	do		38.2	35.3	37.0		36.1	35.6	36.2		37.8	35.0	34.9
Milk, fresh	Quart	8.0	14.0	14.0	14.0	8.0	12.0	13.3	14.0	8.8	14.7	14.0	13.7
Milk, evaporated	15-16 oz. can		10.9	11.3	11.4		10.9	11.3	11.2		11.3	11.4	11.4
Butter	Pound	39.9	51.3	58.8	56.0	41.4	53.5	58.7	58.9	41.8	55.9	63.0	60.1
Oleomargarine (all butter substitutes)	do		28.8	27.2	27.0		31.8	28.7	28.3		33.0	28.6	28.4
Cheese	do	25.0	41.5	43.8	43.4	21.6	36.0	40.6	40.1	23.0	38.5	39.6	39.9
Lard	do	14.8	22.2	19.6	19.5	13.3	20.0	16.8	16.5	15.8	22.9	20.9	20.5
Vegetable lard substitute	do		26.7	26.6	26.7		25.9	26.1	26.2		27.3	27.1	26.8
Eggs, strictly fresh	Dozen	32.7	52.8	61.2	59.4	30.3	49.0	60.6	57.7	35.0	55.5	65.0	60.5
Eggs, storage	do	23.8	40.2	45.6	47.6	23.3	38.1	41.4	43.8	24.5	40.8	41.9	42.8
Bread	Pound	6.1	9.8	9.9	9.6	4.8	9.2	8.6	8.6	5.5	8.1	7.7	7.7
Flour	do	2.8	5.9	4.9	4.9	3.4	6.2	5.5	5.5	3.2	6.0	5.5	5.4
Corn meal	do	2.9	6.2	6.8	6.7	2.6	4.2	4.4	4.4	2.8	5.5	5.4	5.3
Rolled oats	do		8.4	8.6	8.6		8.6	8.9	8.8		9.4	9.4	9.3
Corn flakes	8-oz. pkg.		10.0	9.4	9.5		10.2	9.6	9.6		11.3	9.9	10.1
Wheat cereal	28-oz. pkg.		24.4	25.6	25.7		24.4	25.1	25.1		25.5	25.5	25.8
Macaroni	Pound		19.0	18.9	19.1		18.2	18.5	18.6		21.8	22.1	21.4
Rice	do	9.0	11.5	10.6	10.6	8.8	10.8	9.8	9.4	8.5	11.8	10.7	10.6
Beans, navy	do		9.6	9.7	9.7		8.3	8.4	8.3		8.8	8.8	8.8
Potatoes	do	1.3	5.8	2.9	3.0	1.4	6.0	3.0	3.1	1.4	5.5	3.1	3.1
Onions	do		5.7	4.9	5.4		5.8	4.7	5.1		5.3	4.1	4.5
Cabbage	do		5.3	4.5	5.1		6.3	3.3	3.9		5.7	3.7	3.6
Beans, baked	No. 2 can		12.8	12.6	13.0		11.5	10.4	10.4		13.1	12.8	12.9
Corn, canned	do		17.1	15.8	16.1		15.9	15.2	15.3		18.0	16.5	17.5
Peas, canned	do		17.5	16.2	16.5		17.4	17.1	17.1		18.3	17.8	18.0
Tomatoes, canned	do		14.1	13.8	13.8		12.6	11.7	11.9		14.2	14.1	13.7
Sugar, granulated	Pound	5.3	6.5	6.8	6.9	5.7	6.8	7.3	7.3	5.6	6.9	7.5	7.6
Tea	do	53.3	72.2	71.4	69.9	60.0	77.3	79.1	80.1	50.0	78.8	81.2	78.7
Coffee	do	30.0	51.6	47.0	48.9	25.6	46.5	44.7	44.0	26.5	54.1	51.7	50.8
Prunes	do		18.1	15.6	15.4		17.3	13.7	13.3		17.2	13.4	14.0
Raisins	do		15.3	14.4	14.4		14.3	14.1	14.2		14.3	13.5	13.5
Bananas	Dozen		43.1	40.9	40.4		37.3	38.9	41.1		40.0	41.3	41.1
Oranges	do		51.3	61.5	56.6		41.3	47.2	46.0		48.9	57.7	54.3

¹ The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

² Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL

Article	Unit	Houston, Tex.			Indianapolis, Ind.				Jacksonville, Fla.			
		Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928
					1913	1926			1913	1926		
Sirloin steak.....	Pound.....	Cts. 31.7	Cts. 36.0	Cts. 36.8	Cts. 23.5	Cts. 36.4	Cts. 40.2	Cts. 42.3	Cts. 26.0	Cts. 37.8	Cts. 35.0	Cts. 35.4
Round steak.....	do.....	30.0	35.0	36.0	20.3	35.1	38.7	40.0	20.3	32.2	30.9	30.8
Rib roast.....	do.....	25.0	28.0	28.7	16.3	28.8	29.4	31.1	23.3	27.6	26.9	27.3
Chuck roast.....	do.....	19.0	22.5	23.8	14.3	24.4	25.4	26.9	14.0	19.8	20.6	21.2
Plate beef.....	do.....	16.2	19.7	20.0	10.6	15.3	16.2	17.0	11.2	11.8	13.4	13.1
Pork chops.....	do.....	34.6	35.2	33.0	18.0	34.6	30.5	29.2	22.3	36.1	31.4	30.1
Bacon, sliced.....	do.....	48.9	44.5	44.2	27.7	44.6	42.1	40.4	26.8	48.7	39.5	39.3
Ham, sliced.....	do.....	50.8	50.0	48.2	28.8	55.2	51.2	50.4	25.7	52.2	45.8	45.8
Lamb, leg of.....	do.....	36.0	32.0	33.3	17.7	42.5	39.0	39.0	20.3	41.7	38.4	37.6
Hens.....	do.....	37.4	31.8	33.2	20.0	38.7	34.8	36.7	22.0	39.9	33.9	34.2
Salmon, canned, red.....	do.....	35.1	33.5	33.9	—	35.6	34.2	35.3	—	38.4	35.0	35.8
Milk, fresh.....	Quart.....	17.3	15.6	15.6	8.0	12.0	12.0	12.0	12.4	22.0	20.3	20.3
Milk, evaporated.....	15-16 oz. can.....	11.5	11.7	11.7	—	10.8	10.8	10.7	—	12.5	11.7	11.8
Butter.....	Pound.....	54.9	56.2	56.0	40.7	53.9	58.9	56.9	43.4	58.6	55.7	57.5
Oleomargarine (all butter substitutes).....	do.....	31.5	27.4	26.5	—	32.2	29.3	29.3	—	32.2	29.9	30.3
Cheese.....	do.....	34.5	35.5	36.1	21.0	37.1	39.1	40.0	22.5	35.3	37.2	37.5
Lard.....	do.....	24.7	20.4	20.3	15.0	19.8	17.4	16.4	15.0	23.8	21.3	20.1
Vegetable lard substitute.....	do.....	17.4	18.1	16.4	—	26.4	27.4	27.0	—	24.4	21.6	21.2
Eggs, strictly fresh.....	Dozen.....	49.4	50.2	54.7	34.2	50.6	58.1	54.7	38.3	66.4	59.8	57.3
Eggs, storage.....	do.....	40.5	39.8	43.3	23.7	42.7	46.0	41.3	30.0	45.3	39.7	48.0
Bread.....	Pound.....	9.0	8.5	8.7	5.1	8.1	8.1	8.0	6.5	11.0	11.0	10.1
Flour.....	do.....	6.0	5.2	5.2	3.2	5.9	5.5	5.4	3.7	6.9	6.7	6.5
Corn meal.....	do.....	4.2	4.3	4.2	2.6	4.2	4.2	4.0	2.8	4.2	4.2	4.2
Rolled oats.....	do.....	9.1	8.8	8.8	—	8.1	8.5	8.7	—	9.6	9.2	9.5
Corn flakes.....	8-oz. pkg.....	11.8	9.1	8.9	—	10.1	9.4	9.4	—	11.3	9.9	9.9
Wheat cereal.....	28-oz. pkg.....	25.7	25.2	25.5	—	24.6	26.8	26.4	—	24.7	24.8	24.8
Macaroni.....	Pound.....	18.9	18.1	17.9	—	18.9	19.2	18.8	—	20.4	19.2	19.1
Rice.....	do.....	9.8	7.6	7.5	9.2	11.3	10.5	10.4	6.6	11.2	8.3	8.1
Beans, navy.....	do.....	10.0	9.7	9.8	—	8.9	8.6	8.9	—	11.2	9.6	9.9
Potatoes.....	do.....	6.3	4.2	4.2	1.3	5.9	2.7	2.7	2.3	7.7	3.5	3.9
Onions.....	do.....	6.3	4.8	5.1	—	6.2	5.6	5.3	—	8.3	5.7	6.2
Cabbage.....	do.....	7.0	5.0	5.0	—	5.5	4.0	4.1	—	7.2	3.6	4.1
Beans, baked.....	No. 2 can.....	12.4	10.9	10.5	—	11.2	10.3	9.7	—	11.3	10.5	10.4
Corn, canned.....	do.....	15.8	13.4	13.7	—	15.2	14.0	13.7	—	19.2	18.0	18.3
Peas, canned.....	do.....	14.6	13.0	13.9	—	15.6	14.3	14.2	—	19.9	18.1	16.6
Tomatoes, canned.....	do.....	10.8	9.7	9.7	—	13.5	12.9	12.2	—	11.2	9.7	9.9
Sugar, granulated.....	Pound.....	6.8	6.8	6.9	6.3	7.0	7.4	7.3	6.4	7.2	7.2	7.5
Tea.....	do.....	83.0	84.1	83.6	60.0	82.9	87.3	88.3	60.0	96.7	98.7	98.9
Coffee.....	do.....	45.5	42.0	42.0	31.3	50.8	47.6	47.8	34.5	51.6	46.4	47.7
Prunes.....	do.....	16.7	12.7	13.0	—	20.0	15.9	14.6	—	18.4	14.9	15.3
Raisins.....	do.....	14.6	12.3	12.9	—	16.4	14.9	14.2	—	16.5	14.9	15.0
Bananas.....	Dozen.....	29.0	26.3	26.3	—	30.9	31.5	31.7	—	32.0	27.9	26.4
Oranges.....	do.....	44.4	40.1	40.5	—	44.4	50.4	49.4	—	35.0	33.1	32.6

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Kansas City, Mo.				Little Rock, Ark.				Los Angeles, Calif.				Louisville, Ky.				Manchester, N. H.			
Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928
1913	1926			1913	1926			1913	1926			1913	1926			1913	1926		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
21.8	37.7	39.9	40.5	23.3	33.8	36.7	38.1	22.2	36.4	39.8	41.3	20.6	33.2	37.6	39.7	33.6	56.8	61.0	59.7
19.5	31.1	34.7	35.4	19.2	30.4	34.6	35.0	20.0	29.6	33.6	34.1	17.5	28.8	34.6	36.2	27.6	45.2	47.2	46.5
16.7	26.4	27.6	28.5	17.7	26.5	29.1	30.7	17.4	28.8	31.3	32.5	18.1	24.7	27.5	29.3	18.4	28.3	30.8	30.1
14.0	19.5	21.7	22.3	15.0	18.2	22.5	23.3	14.7	20.3	23.2	24.0	13.0	18.3	21.6	23.3	16.4	22.9	25.5	25.4
10.3	12.9	15.7	16.2	12.5	14.8	17.3	18.8	11.8	14.7	16.4	17.2	10.6	15.2	17.7	19.5	16.2	17.1	18.2	
18.0	34.1	26.6	27.1	19.3	34.2	29.5	28.6	24.4	41.9	38.7	39.3	18.0	32.8	28.1	26.1	17.6	35.9	32.3	28.8
28.2	49.0	44.0	44.8	33.8	48.2	45.8	43.5	33.8	57.0	53.9	53.3	27.5	46.1	45.8	44.5	22.2	42.0	38.9	37.4
26.4	54.3	49.0	48.9	28.3	50.0	50.4	49.7	35.0	67.1	66.3	66.6	27.0	47.9	46.5	49.2	25.4	44.0	42.7	42.2
16.1	33.9	35.2	35.4	19.2	40.0	38.1	37.0	17.4	37.7	37.4	37.3	16.9	39.0	38.6	36.7	17.0	38.3	36.0	35.7
16.0	34.4	31.0	32.5	17.2	30.5	28.7	29.8	26.8	42.9	42.8	43.8	20.6	38.8	34.4	36.3	23.2	42.1	41.8	41.8
	37.5	36.2	36.5		38.0	35.3	35.2		34.8	35.4	34.1		36.1	34.3	34.5		39.1	35.4	34.9
8.7	13.0	13.0	13.0	10.0	15.0	15.0	15.0	10.0	15.0	15.0	15.0	8.8	13.8	13.0	13.0	8.0	14.0	15.0	15.0
	11.8	11.7	11.5		12.4	12.1	12.0		10.2	10.1	10.0		11.9	11.9	11.8		13.1	12.9	12.9
40.0	54.0	56.0	56.1	45.0	56.1	55.8	55.9	44.5	54.3	57.3	56.4	41.3	55.6	59.8	58.3	41.2	57.2	56.8	59.2
	28.0	26.1	25.5		31.1	27.6	28.0		34.0	25.8	25.8		34.5	26.6	27.0		27.5	23.5	24.0
21.5	36.4	38.2	39.7	21.7	37.2	38.5	39.6	19.5	40.0	38.5	38.5	20.8	38.1	39.2	40.1	21.3	36.9	38.9	39.2
15.9	21.9	18.3	18.3	14.8	23.4	21.9	21.7	18.0	24.4	21.0	20.9	15.5	21.2	17.3	16.7	16.0	21.3	18.4	18.1
	27.2	26.6	27.0		23.6	21.1	20.7		25.7	24.6	23.5		28.2	27.9	27.2		26.3	26.5	26.3
31.3	47.4	53.6	50.7	33.3	49.1	55.0	56.2	41.0	42.9	49.9	43.3	30.0	50.7	60.4	54.9	37.2	58.5	67.3	59.4
25.0	37.7	39.3	38.9	25.0	42.3	40.7	49.0	30.0	36.5	42.0	41.0	24.2	43.7			25.0	44.6	46.8	47.9
8.9	9.9	9.7	9.7	6.0	8.7	9.5	9.3	6.2	8.6	8.5	8.7	5.7	9.3	9.2	9.1	5.9	8.7	8.7	8.6
8.1	6.2	5.0	4.9	3.6	6.8	6.2	6.0	3.4	5.9	5.1	5.1	3.5	7.1	6.1	6.1	3.4	6.5	5.5	5.5
2.5	5.1	5.0	5.5	2.4	4.2	3.9	3.9	3.3	5.2	5.6	5.6	2.2	4.1	4.0	3.9	3.8	5.2	5.2	5.2
	9.2	9.0	8.9		10.2	10.2	10.4		9.7	10.0	9.9		8.6	8.5	8.3		9.0	8.8	9.1
	12.2	9.8	9.8		12.5	10.3	10.6		10.2	9.5	9.4		10.7	9.5	9.7		11.4	9.6	9.7
	26.9	26.7	26.9		24.8	27.2	27.6		24.7	24.9	24.9		24.3	25.2	26.7		25.2	25.7	25.9
	20.1	19.8	20.2		20.8	20.8	20.6		17.5	18.5	18.3		19.5	18.9	18.9		24.5	23.5	23.7
8.7	11.0	9.6	9.5	8.3	10.0	8.1	7.9	7.7	11.1	9.8	10.0	8.1	11.2	11.1	10.8	8.5	11.1	9.5	9.4
	9.7	9.5	9.7		9.9	8.0	9.6		9.8	9.5	9.4		8.4	8.4	8.4		9.3	9.2	9.2
1.5	5.6	2.4	2.6	1.7	6.3	3.5	3.5	1.1	5.5	3.0	2.8	1.6	6.0	2.9	3.1	1.5	5.9	2.6	2.7
	6.8	5.1	6.0		7.2	5.5	5.9		6.3	4.8	5.1		5.8	4.6	5.7		5.3	4.6	5.0
	6.4	3.7	3.9		6.9	4.3	4.6		4.9	4.3	4.6		6.4	3.9	4.9		4.6	3.2	3.3
	13.5	12.2	11.8		11.9	10.2	10.2		11.6	10.8	10.7		11.0	10.2	10.2		14.1	12.8	13.3
	15.4	14.2	14.0		16.9	16.5	16.6		16.2	15.7	16.1		17.5	15.4	15.3		18.1	16.5	16.4
	15.7	15.1	14.9		18.7	17.7	17.5		18.0	16.7	16.8		16.1	15.2	15.2		19.4	18.6	18.2
	12.4	11.6	11.2		12.2	10.1	10.0		15.6	14.7	14.5		12.0	10.5	10.6		13.5	12.3	12.1
8.9	6.9	7.4	7.5	5.9	7.5	7.8	7.7	5.9	6.6	6.8	6.8	5.5	7.1	7.3	7.4	5.8	6.7	7.3	7.3
54.0	79.4	94.1	92.9	50.0	103.9	101.0	106.3	54.5	73.9	73.8	72.6	60.0	80.4	89.6	92.7	45.0	63.7	65.2	64.5
27.8	53.6	50.3	51.1	30.8	56.2	52.8	52.0	36.3	54.6	51.7	52.3	27.5	50.7	47.0	49.2	32.0	52.5	49.5	50.1
	17.8	13.7	13.8		18.5	14.7	15.3		16.6	12.7	12.4		16.9	14.5	14.3		15.7	13.7	12.7
	15.4	14.5	14.5		15.7	15.0	15.1		12.5	11.8	11.5		14.8	13.7	13.8		14.5	13.3	13.4
	11.5	10.8	11.2		8.9	9.5	9.5		9.8	9.9	9.2		10.6	10.0	10.0		9.9	9.7	9.5
	47.8	55.2	53.5		45.1	47.1	49.4		43.1	54.8	48.8		40.3	41.7	39.6		45.7	55.7	51.4

No. 2½ can.

Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL

Article	Unit	Memphis, Tenn.				Milwaukee, Wis.				Minneapolis, Minn.			
		Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928
		1913	1926			1913	1926			1913	1926		
Sirloin steak.....	Pound.....	Cts. 20.0	Cts. 35.3	Cts. 38.9	Cts. 40.0	Cts. 20.5	Cts. 37.3	Cts. 40.8	Cts. 40.8	Cts. 20.0	Cts. 30.9	Cts. 34.8	Cts. 36.8
Round steak.....	do.....	16.8	31.7	36.4	35.7	18.5	33.5	36.0	36.1	17.7	27.8	31.2	32.7
Rib roast.....	do.....	18.2	26.4	28.9	28.8	17.3	28.2	29.4	30.6	16.5	24.7	28.0	29.0
Chuck roast.....	do.....	13.9	19.2	22.4	23.1	15.0	23.5	26.3	26.7	14.1	19.4	23.3	24.5
Plate beef.....	do.....	10.1	14.6	19.2	19.8	10.5	14.1	16.3	16.3	9.0	11.2	15.0	15.5
Pork chops.....	do.....	18.6	31.1	29.1	25.9	15.3	33.9	28.4	27.9	16.3	33.2	30.2	31.3
Bacon, sliced.....	do.....	29.1	42.8	38.9	36.3	25.5	46.7	46.1	45.9	25.0	48.4	46.7	46.2
Ham, sliced.....	do.....	26.4	49.6	50.6	48.2	26.0	49.8	46.8	47.0	27.5	50.4	48.5	48.3
Lamb, leg of.....	do.....	20.1	39.6	35.2	36.3	18.5	40.5	37.0	37.3	13.6	36.0	33.7	33.7
Hens.....	do.....	19.4	33.5	30.9	30.9	17.8	36.6	31.2	32.8	17.3	35.9	33.4	35.0
Salmon, canned, red.....	do.....	33.8	30.4	32.6	32.2	34.2	35.3	39.2	35.3	39.2	36.1	36.7	36.7
Milk, fresh.....	Quart.....	10.0	15.0	15.0	15.0	7.0	10.0	11.0	11.0	7.5	11.7	12.0	12.0
Milk, evaporated.....	15-16 oz. can.....	11.6	11.6	11.7	11.3	11.3	11.4	12.1	11.8	11.8	11.8	11.8	11.8
Butter.....	Pound.....	42.1	55.1	57.3	57.7	38.0	50.5	58.6	55.1	39.6	50.0	57.1	54.3
Oleomargarine (all butter substitutes).....	do.....	27.2	25.3	24.3	29.2	27.1	27.0	29.0	25.6	25.8	25.8	25.8	25.8
Cheese.....	do.....	20.0	34.4	38.4	38.3	22.3	35.3	38.0	37.3	20.3	35.4	37.5	36.3
Lard.....	do.....	15.2	20.1	16.2	15.4	15.0	22.3	19.6	19.2	15.0	20.9	18.5	18.5
Vegetable lard substitute.....	do.....	23.7	22.8	21.8	26.9	26.5	26.4	27.4	27.1	27.3	27.1	27.3	27.3
Eggs, strictly fresh.....	Dozen.....	31.4	48.9	51.4	49.6	34.6	61.5	52.0	31.5	46.1	53.9	46.6	46.6
Eggs, storage.....	do.....	25.0	38.3	38.3	42.8	25.3	38.7	39.0	39.9	23.0	38.3	40.0	38.0
Bread.....	Pound.....	6.0	9.7	9.5	9.4	5.6	9.0	9.1	8.8	5.7	9.9	8.7	8.9
Flour.....	do.....	3.6	7.1	6.0	5.9	3.1	5.7	4.7	4.8	2.8	5.8	5.1	5.0
Corn meal.....	do.....	2.1	3.7	3.6	3.6	3.3	5.6	5.7	5.9	2.4	5.4	5.4	5.7
Rolled oats.....	do.....	9.4	9.0	9.0	8.7	8.4	8.3	8.4	8.1	7.9	8.4	8.1	7.9
Corn flakes.....	8-oz. pkg.....	11.0	9.8	9.8	10.5	9.3	9.3	10.9	9.8	10.0	10.9	9.8	10.0
Wheat cereal.....	28-oz. pkg.....	25.9	25.7	25.6	24.5	24.7	24.7	25.8	25.6	25.5	25.8	25.6	25.5
Macaroni.....	Pound.....	19.5	19.4	19.7	18.1	17.8	18.0	19.4	18.8	18.2	19.4	18.8	18.2
Rice.....	do.....	8.0	10.3	8.3	8.6	9.0	11.8	10.3	10.4	8.6	11.9	10.2	10.2
Beans, navy.....	do.....	9.6	9.4	9.6	8.8	8.7	8.9	9.3	9.9	9.9	9.3	9.9	9.9
Potatoes.....	do.....	1.6	6.2	3.2	3.3	1.2	4.9	2.5	2.4	1.0	5.1	2.2	2.2
Onion.....	do.....	5.4	4.7	5.3	5.1	4.5	4.6	5.4	4.3	4.3	5.4	4.3	4.3
Cabbage.....	do.....	5.8	3.4	3.9	5.1	3.3	3.6	4.9	2.9	3.1	4.9	2.9	3.1
Beans, baked.....	No. 2 can.....	12.1	11.0	11.0	11.3	10.9	11.0	13.4	11.8	12.1	13.4	11.8	12.1
Corn, canned.....	do.....	16.6	14.6	14.6	16.5	15.9	15.9	16.0	14.2	14.2	16.0	14.2	14.2
Peas, canned.....	do.....	17.7	15.0	15.7	17.1	15.7	16.0	16.2	14.7	14.6	16.2	14.7	14.6
Tomatoes, canned.....	do.....	11.5	10.1	9.7	14.0	13.4	13.4	14.5	13.3	12.9	14.5	13.3	12.9
Sugar, granulated.....	Pound.....	5.8	6.9	6.9	6.9	5.5	6.3	6.8	6.8	5.6	6.8	7.3	7.2
Tea.....	do.....	63.8	94.4	98.4	97.2	50.0	71.3	70.3	71.7	45.0	61.8	60.8	59.0
Coffee.....	do.....	27.5	51.7	47.6	48.9	27.5	47.0	43.0	43.4	30.8	54.3	50.8	50.9
Prunes.....	do.....	17.7	14.1	14.3	17.4	14.0	13.2	17.2	14.6	14.4	17.2	14.6	14.4
Raisins.....	do.....	15.3	14.2	14.1	14.8	13.9	14.1	15.3	13.4	14.3	15.3	13.4	14.3
Bananas.....	Dozen.....	¹ 9.1	² 9.0	² 9.1	² 9.8	¹ 10.1	² 9.8	¹ 11.3	² 11.5	² 11.7	¹ 11.3	² 11.5	² 11.7
Oranges.....	do.....	41.7	42.0	43.6	47.1	52.6	53.2	49.8	56.4	56.0	49.8	56.4	56.0

¹ Whole.

RETAIL PRICES OF FOOD

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ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Mobile, Ala.			Newark, N. J.				New Haven, Conn.				New Orleans, La.				New York, N. Y.			
Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928
			1913	1926			1913	1926			1913	1926			1913	1926		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
33.3	35.9	36.5	25.2	44.8	49.0	49.5	30.0	54.1	58.7	58.6	19.6	34.6	37.0	37.2	24.4	45.6	50.6	49.8
32.1	35.5	36.0	24.8	42.7	46.9	47.2	26.2	43.9	47.6	46.2	17.1	30.1	33.3	32.9	23.1	43.4	47.1	46.9
27.3	29.1	29.5	19.6	36.0	40.0	38.7	22.6	37.0	39.2	39.2	18.3	29.0	31.0	31.3	21.0	38.9	43.0	42.3
21.7	23.8	25.0	16.8	24.8	29.2	29.6	17.6	27.5	30.0	28.8	12.1	20.4	22.5	22.3	14.9	24.9	29.5	28.2
17.2	18.4	18.3	11.6	14.0	17.2	17.6	-----	15.2	16.4	16.6	10.9	18.3	19.4	19.0	13.7	21.0	23.6	23.2
37.6	35.0	34.4	21.2	39.6	35.7	36.2	21.8	42.4	40.1	40.6	20.0	35.2	32.7	31.3	19.5	39.1	36.9	35.1
48.4	42.8	44.4	22.4	44.6	43.9	43.4	25.8	49.9	45.9	44.8	29.8	45.2	44.5	42.9	23.0	49.8	47.8	45.2
50.0	49.6	52.1	18.4	57.6	52.0	52.3	30.0	57.7	58.5	56.7	26.3	49.3	46.8	48.7	27.8	59.0	56.5	55.2
41.3	40.7	40.8	21.2	39.4	36.9	37.0	19.0	39.9	38.5	37.7	19.8	39.5	38.5	38.0	15.9	37.5	36.3	35.1
37.6	37.3	36.5	20.0	36.1	33.6	31.7	19.2	36.6	33.8	30.6	20.0	35.2	32.7	31.3	19.5	39.1	36.9	35.1
39.0	34.4	35.1	-----	35.7	32.8	33.6	-----	34.1	34.3	34.6	-----	37.7	37.0	36.5	-----	35.8	34.6	34.2
17.8	18.0	18.0	9.0	15.0	16.0	16.0	9.0	16.0	16.0	16.0	10.0	14.0	14.0	14.0	9.0	15.0	16.0	16.0
11.7	11.5	11.5	-----	11.3	11.1	11.1	-----	12.3	12.1	12.1	-----	11.1	11.2	11.2	-----	11.1	11.1	11.2
58.8	57.0	58.4	43.2	55.8	61.7	61.2	38.3	56.3	55.6	56.2	41.1	56.6	58.5	58.8	40.8	54.4	61.3	60.1
31.3	29.4	28.6	-----	31.1	30.5	30.5	-----	33.1	29.1	29.1	-----	32.1	29.4	29.1	-----	31.0	27.3	27.0
38.0	38.1	38.5	24.5	39.5	39.9	40.7	22.0	39.4	40.3	40.3	22.0	35.4	39.9	40.4	20.0	38.5	40.5	40.5
22.3	19.7	19.6	16.3	22.6	19.5	19.4	15.2	22.3	18.7	19.3	14.4	22.1	19.3	19.3	15.9	23.2	20.3	20.1
21.5	21.3	21.1	-----	26.3	25.6	25.5	-----	25.8	25.6	26.2	-----	22.6	19.6	19.9	-----	25.9	25.5	25.8
50.6	53.4	50.3	48.8	63.2	70.6	65.6	45.9	70.2	82.6	71.1	35.6	53.2	48.7	54.0	42.6	61.6	73.2	66.6
44.1	43.6	46.2	29.4	43.6	43.1	47.5	28.2	46.4	47.5	51.3	25.0	40.7	38.7	43.8	27.4	46.3	42.9	48.1
9.6	10.1	10.1	5.7	9.3	9.1	9.1	5.7	9.0	9.2	9.2	5.1	8.9	8.7	8.7	6.0	9.6	9.6	9.1
6.8	6.1	6.1	3.8	6.0	5.2	5.1	3.2	6.3	5.2	5.3	3.7	7.6	6.6	6.6	3.3	6.3	5.4	5.3
4.1	4.1	4.1	3.6	6.8	6.9	6.8	3.2	7.0	7.0	7.0	2.6	4.0	4.4	4.1	3.5	6.4	6.5	6.7
8.8	8.5	8.6	-----	8.4	8.2	8.2	-----	9.4	9.3	9.1	-----	9.1	8.9	8.9	-----	8.7	8.6	8.6
11.2	9.5	9.5	-----	10.1	9.2	9.2	-----	10.9	10.2	10.1	-----	10.7	9.6	9.7	-----	10.0	9.1	9.2
24.8	24.5	24.4	-----	24.1	24.2	24.7	-----	25.1	24.1	24.5	-----	24.8	24.6	24.9	-----	24.0	23.9	23.9
20.6	20.7	20.9	-----	21.1	21.4	21.4	-----	22.9	22.2	21.8	-----	9.3	10.7	10.8	-----	20.8	21.1	20.9
11.2	9.3	9.3	9.0	11.2	10.2	9.8	9.3	12.1	10.0	10.5	7.4	10.5	9.2	9.4	8.0	10.7	9.9	10.2
10.1	9.2	9.4	-----	10.0	10.1	9.9	-----	9.8	9.5	9.6	-----	9.1	8.9	9.2	-----	11.0	10.2	10.3
6.4	4.0	3.8	2.5	6.3	3.3	3.3	1.7	6.1	3.2	3.2	2.0	6.1	3.8	3.7	2.5	6.4	3.5	3.6
5.5	4.6	5.1	-----	6.2	4.8	5.1	-----	6.2	5.3	5.5	-----	5.1	4.4	4.6	-----	5.9	5.0	5.1
5.7	4.5	4.7	-----	5.4	4.4	4.5	-----	5.7	4.5	4.3	-----	5.2	4.1	5.4	-----	5.4	3.6	4.0
11.0	10.3	10.3	-----	11.6	10.3	10.1	-----	11.6	11.5	11.6	-----	11.4	10.6	11.1	-----	11.2	11.0	10.9
16.8	15.8	15.9	-----	17.5	15.3	15.2	-----	18.6	18.1	17.8	-----	15.3	14.7	14.7	-----	15.1	14.5	14.5
16.3	15.6	15.8	-----	17.2	17.9	17.8	-----	19.9	18.6	19.2	-----	16.4	17.6	17.8	-----	15.7	14.7	15.2
11.4	10.2	9.8	-----	11.2	10.5	10.3	-----	12.4	12.8	12.8	-----	11.2	10.3	10.9	-----	11.0	11.0	11.1
6.7	7.0	7.1	5.7	6.0	6.7	6.7	5.7	6.5	7.0	7.0	5.7	6.1	6.6	6.6	5.1	5.8	6.2	6.3
80.0	80.0	79.4	53.8	64.2	60.1	58.8	55.0	59.5	58.9	59.6	62.1	82.4	79.5	80.7	43.3	64.7	66.5	66.7
49.4	48.4	48.2	29.3	49.7	47.4	48.5	33.8	53.3	49.9	51.5	27.1	37.6	35.4	35.2	27.5	48.0	46.4	47.0
16.9	12.7	12.4	-----	16.3	13.0	12.8	-----	16.2	13.9	14.0	-----	18.1	14.3	14.2	-----	16.1	12.2	12.6
14.5	13.4	13.4	-----	14.0	14.5	14.3	-----	14.1	13.7	13.7	-----	14.2	13.2	12.9	-----	14.5	13.2	13.1
24.0	24.4	24.4	-----	36.9	38.0	38.0	-----	34.1	33.4	33.2	-----	17.9	17.5	16.4	-----	37.1	37.8	40.2
40.9	43.9	46.0	-----	51.1	57.8	54.0	-----	50.8	53.1	53.5	-----	41.5	46.9	51.3	-----	54.9	62.7	60.3

¹ Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL

Article	Unit	Norfolk, Va.			Omaha, Nebr.				Peoria, Ill.		
		Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928
					1913	1926					
Sirloin steak	Pound	Cts. 40.1	Cts. 42.3	Cts. 42.3	Cts. 23.6	Cts. 36.6	Cts. 38.9	Cts. 38.4	Cts. 33.6	Cts. 34.8	Cts. 35.5
Round steak	do	34.1	37.0	36.2	19.2	32.8	36.1	36.7	32.1	34.0	34.2
Rib roast	do	31.3	32.6	33.9	16.7	26.1	26.5	26.5	23.7	25.6	25.0
Chuck roast	do	22.3	24.4	25.0	13.8	21.7	23.1	22.9	20.4	22.8	22.6
Plate beef	do	14.9	17.5	17.7	9.2	12.1	14.6	14.5	13.8	15.3	15.3
Pork chops	do	34.9	32.0	29.8	16.7	35.7	30.5	28.8	33.3	31.3	28.0
Bacon, sliced	do	44.5	43.1	41.7	25.4	51.1	48.1	46.6	50.0	47.7	45.4
Ham, sliced	do	46.8	46.3	45.3	27.0	54.7	49.3	48.4	52.1	50.4	49.6
Lamb, leg of	do	41.3	40.5	40.0	15.0	37.7	37.6	36.7	36.2	39.4	38.3
Ham	do	38.4	36.5	37.7	16.3	33.4	29.8	30.8	34.8	32.2	32.2
Salmon, canned, red	do	36.7	35.7	37.1	—	38.1	35.8	36.3	38.4	35.5	35.7
Milk, fresh	Quart	17.5	18.0	18.0	8.2	11.6	11.3	11.3	11.7	13.0	13.0
Milk, evaporated	15-16 oz. can	11.4	11.8	11.5	—	11.9	11.8	11.8	11.6	11.3	11.4
Butter	Pound	58.6	60.5	60.1	39.2	51.4	53.9	54.2	51.7	55.9	54.6
Oleomargarine (all butter substitutes)	do	28.9	25.0	25.0	—	31.3	26.4	25.9	31.2	28.9	28.6
Cheese	do	34.5	37.5	36.9	22.9	37.5	38.7	39.2	35.9	38.3	39.2
Lard	do	20.9	19.1	18.5	16.4	24.9	20.2	19.4	22.5	19.2	18.5
Vegetable lard substitute	do	21.6	23.0	23.2	—	27.0	25.6	25.9	27.2	27.7	27.7
Eggs, strictly fresh	Dozen	55.5	63.0	54.1	29.5	47.1	51.1	46.2	48.3	60.2	52.9
Eggs, storage	do	44.5	47.5	46.8	—	39.8	40.1	38.7	40.4	40.1	43.0
Bread	Pound	9.5	9.9	9.9	5.2	10.1	9.7	9.7	10.0	10.0	10.0
Flour	do	6.3	5.5	5.5	2.9	5.7	4.5	4.3	6.1	5.2	5.0
Corn meal	do	4.7	4.6	4.6	2.3	5.0	4.6	4.7	4.9	4.9	4.8
Rolled oats	do	8.5	8.4	8.6	—	10.3	10.1	10.1	9.0	9.3	9.0
Corn flakes	8-oz. pkg	10.4	9.7	9.7	—	12.0	10.1	9.8	12.0	10.1	9.7
Wheat cereal	28-oz. pkg	23.9	24.8	24.8	—	28.3	27.8	28.4	25.4	26.1	26.3
Macaroni	Pound	19.3	19.0	19.0	—	21.3	21.3	21.2	20.8	18.6	18.6
Rice	do	11.6	11.4	11.3	8.5	11.4	11.0	10.5	11.8	11.3	10.9
Beans, navy	do	9.1	8.5	8.8	—	10.3	10.1	9.8	9.0	9.0	9.0
Potatoes	do	6.4	3.7	3.8	1.3	5.7	2.3	2.4	5.6	2.4	2.4
Onions	do	6.6	4.8	5.3	—	5.9	5.3	5.6	6.1	5.0	5.3
Cabbage	do	5.1	4.2	4.3	—	5.7	3.4	3.7	5.9	3.1	3.4
Beans, baked	No. 2 can	10.1	9.9	9.9	—	14.6	12.9	12.9	11.7	11.1	11.1
Corn, canned	do	15.6	14.8	14.8	—	16.5	16.3	15.6	15.9	15.3	15.3
Peas, canned	do	20.3	17.4	17.8	—	17.4	15.9	15.5	18.0	17.4	17.3
Tomatoes, canned	do	10.2	9.7	9.7	—	14.3	13.2	13.4	14.5	12.9	12.8
Sugar, granulated	Pound	6.2	6.8	6.7	5.9	6.9	7.3	7.1	7.3	8.3	7.8
Tea	do	89.5	96.4	94.5	56.0	78.5	77.8	77.7	64.8	70.5	67.0
Coffee	do	50.4	48.8	49.4	30.0	57.4	53.7	53.7	52.1	48.1	45.8
Prunes	do	17.0	13.3	13.9	—	17.3	14.0	13.9	20.5	17.1	15.9
Raisins	do	14.1	13.5	13.6	—	15.3	14.7	14.7	14.8	14.2	13.8
Bananas	Dozen	33.5	34.5	34.5	—	11.8	11.9	12.0	9.9	11.2	10.5
Oranges	do	49.2	51.1	51.2	—	43.9	54.4	47.1	41.2	49.7	49.6

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Philadelphia, Pa.				Pittsburgh, Pa.				Portland, Me.				Portland, Oreg.				Providence, R. I.			
Jan. 15—		Dec. 15, 1927		Jan. 15, 1928		Jan. 15, 1927		Jan. 15, 1928		Jan. 15, 1927		Jan. 15, 1928		Jan. 15, 1927		Jan. 15, 1928		Jan. 15, 1927	
1913	1926			1913	1926			1913	1926			1913	1926			1913	1926		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
28.3	155.6	161.4	160.0	24.8	46.6	50.3	49.8	160.9	164.3	166.1	21.0	28.9	31.3	34.5	39.6	172.3	176.4	177.2	
23.1	41.7	46.8	46.3	21.4	38.3	41.3	41.3	47.7	49.4	49.7	19.0	25.7	29.1	32.4	29.4	50.6	53.0	51.5	
21.4	37.2	40.4	39.3	20.4	35.0	36.6	36.8	29.6	32.5	32.9	18.7	24.9	26.2	29.1	24.6	39.2	41.1	41.4	
16.5	23.8	30.4	29.8	15.4	24.8	28.5	28.3	20.8	23.1	23.4	15.8	18.0	20.4	23.8	18.4	29.2	31.7	32.2	
10.5	12.3	15.8	17.4	10.8	12.6	16.4	16.6	16.2	19.3	19.5	12.6	13.2	15.7	18.2	-----	19.8	19.3	20.8	
19.8	40.1	36.3	33.7	19.4	38.1	34.6	31.9	38.5	33.1	31.2	20.2	36.3	34.6	35.0	18.0	39.4	35.5	32.1	
23.6	46.2	43.9	42.9	27.2	51.2	49.3	48.6	45.2	43.6	42.5	28.8	52.1	51.7	52.8	21.8	45.9	41.2	41.4	
29.1	55.8	53.3	52.8	29.0	59.8	56.7	57.1	52.4	51.0	49.1	28.8	52.8	54.8	55.6	28.5	56.5	55.0	54.2	
17.7	41.0	39.8	39.0	21.3	41.1	40.4	39.7	38.3	36.2	35.4	17.7	38.0	35.4	35.8	18.7	42.5	38.2	37.9	
20.8	41.4	39.8	40.7	24.3	44.6	41.2	44.5	40.9	40.1	40.7	20.9	35.9	32.2	34.3	23.2	43.1	39.6	40.3	
8.0	12.0	13.0	13.0	8.8	14.7	15.0	14.8	13.5	15.0	15.0	9.7	12.7	12.0	12.0	9.0	14.7	15.7	15.7	
46.4	58.2	63.7	62.5	41.9	56.4	63.2	60.7	58.4	58.8	59.1	44.5	54.7	57.8	57.2	40.0	56.2	54.1	55.4	
32.4	29.0	28.9	-----	32.1	31.5	29.2	29.7	26.7	26.7	26.7	-----	31.0	25.3	25.2	-----	29.7	27.5	25.6	
25.0	41.0	41.0	42.3	24.5	39.8	41.4	42.0	38.7	39.5	39.1	21.3	39.3	38.3	38.5	22.7	36.6	38.3	38.6	
14.4	22.0	18.1	17.9	15.6	22.3	19.9	18.8	21.1	18.6	18.1	17.9	24.8	20.6	20.4	14.7	21.7	18.4	18.2	
38.4	56.7	68.5	63.8	37.6	57.5	65.4	61.4	59.3	72.4	58.1	41.7	39.2	47.1	45.8	42.5	67.7	69.4	64.1	
25.2	41.5	45.2	46.0	25.0	43.3	45.2	44.1	46.5	48.8	47.0	25.0	32.0	35.0	-----	26.8	43.9	47.5	45.1	
4.8	9.4	9.4	9.1	5.3	9.1	8.6	8.5	10.0	10.2	10.1	5.7	9.4	9.2	9.2	6.0	9.2	9.0	9.0	
3.2	6.1	5.0	4.9	3.0	6.0	5.0	5.0	6.3	5.3	5.3	2.8	5.5	4.7	4.8	3.4	6.8	5.6	5.5	
2.8	4.8	5.0	5.2	2.7	5.8	5.9	6.0	5.2	5.0	5.1	3.1	5.5	5.6	6.1	2.9	5.1	5.1	5.1	
-----	8.6	8.5	8.6	-----	9.4	9.1	9.1	7.5	7.8	7.7	-----	10.5	10.4	10.7	-----	9.3	9.0	9.0	
-----	10.0	9.4	9.4	-----	10.6	9.9	10.1	11.6	9.8	9.8	-----	11.3	9.6	9.6	-----	10.8	9.5	9.6	
-----	24.4	24.6	25.3	-----	25.2	25.1	25.2	25.9	25.5	25.9	-----	26.4	26.8	27.1	-----	25.1	25.1	24.7	
-----	21.5	20.9	20.9	-----	22.6	23.4	23.0	25.1	24.2	23.9	-----	18.5	18.3	18.3	-----	23.7	23.1	22.9	
9.8	12.0	11.1	10.9	9.2	12.5	11.2	11.1	12.9	11.9	11.9	8.6	11.4	9.7	9.9	9.3	11.6	10.8	10.1	
2.1	9.3	9.4	9.1	-----	8.9	9.0	9.0	9.9	9.8	10.1	-----	9.8	9.6	9.6	-----	9.8	9.9	9.7	
-----	6.6	3.6	3.6	1.5	6.0	2.9	3.0	5.7	2.8	2.7	0.7	3.8	2.2	2.3	1.7	5.9	2.9	2.8	
-----	5.8	4.2	4.4	-----	6.5	4.8	5.4	5.5	4.4	4.9	-----	4.4	3.7	5.0	-----	5.6	4.6	4.8	
-----	7.4	2.9	3.2	-----	6.3	3.7	4.3	4.2	2.4	2.5	-----	3.1	3.5	4.6	-----	4.9	3.9	4.5	
-----	10.9	10.8	10.6	-----	12.9	12.6	12.7	15.2	14.2	15.0	-----	14.4	12.0	11.7	-----	11.8	10.8	10.6	
-----	15.2	14.3	14.7	-----	17.8	16.3	16.4	16.9	14.4	14.6	-----	19.7	18.4	18.6	-----	18.0	16.8	17.2	
-----	15.3	14.6	15.3	-----	18.2	17.3	17.2	18.8	17.4	17.8	-----	19.3	17.8	18.6	-----	19.7	18.7	18.5	
-----	11.3	11.6	11.3	-----	12.4	11.5	11.6	12.6	12.2	12.3	-----	17.3	17.3	16.8	-----	13.7	12.9	13.0	
5.2	6.1	6.6	6.6	6.0	6.7	7.3	7.3	6.7	7.1	7.2	6.6	6.8	7.0	7.1	5.3	6.5	6.9	6.9	
54.0	71.1	67.8	68.0	58.0	84.0	82.8	82.4	60.9	62.2	62.2	55.0	76.1	76.4	80.3	48.3	61.2	61.1	60.4	
25.0	46.0	40.4	42.9	30.0	51.2	47.6	47.8	54.1	50.1	50.9	35.0	52.6	51.9	52.6	30.0	54.3	50.0	49.9	
-----	16.2	12.8	12.8	-----	18.1	14.2	13.8	15.8	13.3	11.7	-----	14.3	9.9	10.8	-----	16.7	13.0	12.5	
-----	13.5	13.2	13.3	-----	14.7	13.6	13.8	13.1	13.3	13.0	-----	13.8	12.9	12.9	-----	14.1	13.6	13.5	
-----	32.8	33.0	30.6	-----	40.0	42.4	41.2	10.3	11.7	11.7	-----	13.7	11.9	12.6	-----	33.8	31.4	31.4	
-----	50.1	49.4	48.3	-----	48.5	52.0	49.9	47.1	56.0	57.8	-----	46.4	55.9	49.5	-----	51.4	59.3	59.7	

No. 2½ can.

Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL

Article	Unit	Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.		
		Jan. 15—		Dec.	Jan.	Jan.	Dec.	Jan.	Jan. 15—	
				15,	15,	15,	15,	15,		
		1913	1926	1927	1928	1926	1927	1928	1913	1926
Sirloin steak	Pound	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Round steak	do	21.8	38.8	42.2	43.3	40.1	43.8	45.0	22.7	36.9
Rib roast	do	19.5	34.4	37.3	38.7	34.1	37.3	37.5	19.3	34.7
Chuck roast	do	18.3	31.5	33.6	34.1	30.6	32.6	33.0	16.8	30.6
	do	14.3	22.7	24.5	24.8	24.7	27.7	27.9	13.3	21.1
Plate beef	do	11.3	15.9	17.6	17.6	13.9	15.7	16.0	9.2	14.4
Pork chops	do	18.1	36.4	33.6	31.5	39.5	35.3	33.7	17.7	32.3
Bacon, sliced	do	23.2	44.1	42.7	41.6	43.5	40.6	40.2	23.0	46.2
Ham, sliced	do	22.5	44.6	46.1	45.0	52.1	51.4	51.6	25.0	49.6
Lamb, leg of	do	18.7	45.5	41.5	43.7	39.5	37.9	37.3	17.7	37.8
Hens	do	19.8	39.9	34.3	36.2	42.2	39.2	39.6	17.8	35.6
Salmon, canned, red	do		36.5	35.3	35.3	37.0	36.4	36.7		39.0
Milk, fresh	Quart	10.0	14.0	14.0	14.0	12.5	13.5	13.5	8.0	13.0
Milk, evaporated	15-16 oz. can		12.8	12.5	12.4	11.6	11.3	11.3		10.6
Butter	Pound	43.6	62.4	60.6	61.3	56.5	56.2	56.6	40.7	56.3
Oleomargarine (all butter substitutes)	do		31.9	30.7	30.7	32.4	29.0	28.6		28.7
Cheese	do	22.3	36.7	37.1	37.8	38.5	39.9	40.1	20.2	36.1
Lard	do	15.0	22.1	19.1	18.6	21.3	18.1	17.9	13.1	17.9
Vegetable lard substitute	do		26.2	25.6	25.7	23.4	25.6	26.1		26.6
Eggs, strictly fresh	Dozen	29.7	55.7	58.4	52.3	60.0	64.6	56.5	29.3	47.7
Eggs, storage	do	23.7	46.4	41.7	42.5	44.1	44.9	43.6	25.0	36.4
Bread	Pound	5.4	9.5	9.3	9.1	8.9	9.0	9.1	5.6	9.9
Flour	do	3.3	6.3	5.4	5.3	6.1	5.2	5.1	3.1	5.8
Corn meal	do	2.0	5.0	4.8	4.7	6.4	6.2	6.2	2.3	4.7
Rolled oats	do		9.2	8.5	8.6	9.5	9.2	9.4		8.8
Corn flakes	8-oz. pkg		11.2	9.7	9.7	10.5	9.5	9.5		10.1
Wheat cereal	28-oz. pkg		25.4	25.9	26.2	25.7	25.6	25.5		24.7
Macaroni	Pound		20.6	20.9	20.9	23.2	20.8	21.1		21.2
Rice	do	9.8	12.7	11.4	11.6	11.1	9.9	9.8	8.6	10.7
Beans, navy	do		10.0	9.5	9.5	9.7	9.3	9.2		8.4
Potatoes	do	1.8	7.0	3.2	3.5	5.6	2.6	2.5	1.7	5.7
Onions	do		6.9	5.0	5.6	4.9	4.3	4.5		6.1
Cabbage	do		6.5	3.9	4.2	3.9	2.2	1.7		5.4
Beans, baked	No. 2 can		10.7	10.1	10.1	10.9	10.2	10.2		10.9
Corn, canned	do		16.0	15.2	15.1	16.5	16.3	16.2		16.2
Peas, canned	do		20.7	18.5	17.6	18.9	17.5	17.9		16.9
Tomatoes, canned	do		11.0	10.1	10.6	14.3	13.6	14.5		12.2
Sugar, granulated	Pound	5.8	6.6	7.0	7.0	6.2	6.4	6.4	5.8	6.7
Tea	do	56.0	91.8	92.2	90.6	67.4	69.0	69.0	55.0	73.6
Coffee	do	27.4	49.9	45.8	45.7	48.9	46.0	46.0	24.3	48.0
Prunes	do		18.2	14.1	14.3	18.3	14.1	12.9		18.9
Raisins	do		14.4	12.9	13.1	14.1	13.5	13.8		14.8
Bananas	Dozen		35.8	39.0	39.0	38.6	38.3	39.2		32.3
Oranges	do		45.3	46.8	47.5	48.4	51.3	55.0		46.4

¹ No 2½ can.

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

St. Paul, Minn.			Salt Lake City, Utah					San Francisco, Calif.				Savannah, Ga.			Scranton, Pa.			
Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	
			1913	1926			1913	1926						1913	1926			
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
34.4	38.7	38.1	23.1	29.0	33.8	33.4	20.3	32.5	35.8	37.3	31.0	35.4	35.0	21.8	50.9	54.7	55.2	
28.9	34.1	33.7	19.5	25.7	31.8	31.9	18.7	29.9	34.0	34.4	26.0	28.8	28.6	17.5	42.7	45.3	46.2	
28.3	31.8	31.7	19.2	22.3	26.5	26.4	20.3	30.3	33.7	33.9	25.0	27.9	26.8	18.4	37.4	39.6	39.2	
22.2	25.9	25.8	14.8	17.5	21.9	21.7	15.0	19.2	22.7	23.7	16.3	19.0	18.7	14.3	28.5	31.2	31.2	
12.7	15.5	15.3	11.5	12.4	15.2	15.5	12.5	15.5	18.7	19.1	13.6	15.2	15.8	9.8	13.0	14.6	15.3	
32.5	28.5	27.6	21.4	35.5	34.4	32.1	21.8	43.2	40.5	39.3	33.7	31.1	30.0	18.0	41.0	37.3	34.5	
47.6	44.6	43.9	32.0	47.3	46.9	46.5	32.8	62.3	56.8	56.6	43.7	40.7	40.6	24.6	50.3	47.1	46.5	
48.9	44.7	45.8	29.0	51.7	54.2	53.8	30.0	63.3	61.4	61.1	45.0	43.8	43.3	25.5	57.7	55.0	54.5	
33.7	31.9	32.6	17.2	35.5	34.5	34.5	17.2	38.6	39.6	39.9	39.0	40.0	37.5	18.7	45.7	43.5	42.3	
34.7	30.2	33.4	23.6	32.6	30.5	30.5	24.2	43.6	42.6	43.2	35.8	31.8	31.4	21.5	45.3	42.4	43.5	
37.7	38.3	38.9	-----	34.5	34.5	34.9	-----	34.5	33.3	32.9	39.1	34.6	36.3	-----	36.1	35.9	36.2	
11.7	12.0	12.0	8.3	11.5	11.0	10.0	10.0	14.0	14.0	14.0	17.3	17.0	17.0	8.8	12.0	13.0	13.0	
12.0	11.9	12.0	-----	10.6	10.5	10.5	-----	10.3	10.1	9.9	11.3	11.5	11.5	-----	12.1	11.9	11.9	
48.7	55.1	53.1	40.0	51.9	53.4	53.4	41.4	55.4	58.5	57.4	59.8	59.1	59.2	39.0	56.4	57.2	57.6	
28.2	25.1	24.6	-----	31.0	26.8	27.3	-----	32.1	25.8	25.5	36.7	30.9	32.8	-----	32.0	28.4	27.8	
35.4	37.9	38.9	24.2	32.7	31.0	31.3	21.0	39.9	39.8	39.8	36.1	37.5	38.5	18.8	35.6	37.3	37.6	
21.2	18.7	18.3	18.4	24.2	21.4	21.2	17.6	25.1	23.3	23.1	22.0	19.6	18.4	15.6	23.2	19.7	19.3	
27.4	28.7	28.5	-----	29.7	28.9	29.3	-----	27.8	28.2	27.8	19.0	17.7	17.5	-----	26.4	25.7	26.1	
47.0	54.6	47.3	40.0	38.5	45.4	43.5	31.4	44.8	49.4	44.9	54.3	58.2	53.6	37.5	57.8	70.9	64.0	
38.0	40.8	39.8	27.5	25.0	-----	40.0	22.5	42.5	45.0	-----	46.7	43.6	44.2	26.3	41.6	45.7	44.0	
10.2	9.5	9.3	5.9	10.0	9.7	9.8	5.9	9.8	9.5	9.5	10.4	10.7	10.7	5.5	10.3	10.6	10.6	
6.1	5.2	5.1	2.4	4.9	4.1	4.1	3.3	6.3	5.6	5.6	7.1	6.6	6.6	3.6	6.5	5.8	5.8	
5.4	5.2	5.3	3.4	5.4	5.6	5.5	3.4	6.4	6.3	6.2	3.6	3.7	3.8	-----	7.6	7.5	7.5	
10.1	10.1	10.1	-----	8.9	8.7	8.6	-----	9.5	10.0	9.9	9.1	8.9	8.7	-----	10.2	9.8	9.8	
12.0	10.0	10.1	-----	12.5	10.4	10.9	-----	10.5	10.1	10.0	10.5	9.7	9.6	-----	11.1	10.1	10.1	
25.7	26.5	26.5	-----	25.4	25.8	25.9	-----	25.2	25.3	25.3	24.5	24.5	24.8	-----	25.6	25.3	25.5	
19.0	18.3	18.5	-----	20.0	19.6	20.2	-----	14.8	15.9	15.9	18.0	18.5	18.1	-----	23.7	23.2	23.1	
11.3	11.0	10.7	8.2	11.2	8.6	8.8	8.5	11.7	10.7	10.5	10.8	9.8	9.5	8.5	11.5	10.4	10.4	
9.5	9.8	9.5	-----	10.4	8.7	8.8	-----	10.1	9.8	9.6	11.1	9.7	9.8	-----	12.3	10.9	10.6	
4.7	1.8	2.0	1.1	3.4	1.8	1.8	1.6	5.2	3.0	2.9	6.8	3.7	3.6	1.7	5.7	3.0	3.0	
6.5	4.2	4.1	-----	3.0	2.6	3.1	-----	4.5	3.8	4.5	6.8	5.7	6.3	-----	5.8	4.6	4.8	
5.0	3.4	3.5	-----	3.1	2.8	3.0	-----	-----	-----	-----	6.2	4.5	5.3	-----	5.2	3.3	3.5	
13.9	13.7	13.4	-----	14.5	13.1	12.7	-----	13.5	12.7	12.7	11.6	12.2	11.9	-----	11.5	11.2	11.2	
15.3	14.6	14.6	-----	16.4	14.9	14.4	-----	18.5	18.1	18.0	16.5	14.8	15.0	-----	17.5	16.9	16.9	
16.3	15.5	15.0	-----	16.5	15.6	15.8	-----	18.7	17.8	18.2	17.2	16.6	16.6	-----	18.4	17.6	17.3	
14.2	14.0	13.7	-----	15.7	14.0	13.8	-----	15.5	14.7	14.9	10.3	10.0	9.8	-----	12.8	12.4	12.4	
7.1	7.3	7.2	6.8	7.4	8.1	8.0	5.7	6.4	6.9	6.8	6.6	6.9	7.0	6.2	6.7	7.0	7.0	
69.6	63.2	66.0	65.7	85.3	87.0	84.2	50.0	68.8	72.8	71.4	77.1	82.7	83.1	52.5	65.9	71.2	71.6	
52.0	51.7	52.2	35.8	57.4	54.3	54.5	32.0	52.8	52.6	52.5	49.1	45.5	45.7	31.3	52.8	49.7	49.9	
17.1	14.2	14.0	-----	16.3	12.9	12.6	-----	15.0	11.2	11.8	15.4	13.3	13.1	-----	18.6	14.9	15.2	
15.6	15.2	14.9	-----	13.9	12.9	12.9	-----	12.5	11.9	12.1	13.5	14.0	13.7	-----	14.4	13.9	13.8	
11.9	12.0	12.0	-----	15.5	12.3	12.7	-----	35.6	31.9	30.0	30.9	31.7	30.0	-----	34.0	33.3	32.3	
51.6	57.7	60.9	-----	42.6	51.3	49.9	-----	47.5	50.6	52.9	39.1	42.5	41.3	-----	51.8	58.1	57.5	

¹ Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Article	Unit	Seattle, Wash.				Springfield, Ill.				Washington, D. C.			
		Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	Jan. 15, 1926	Dec. 15, 1927	Jan. 15, 1928	Jan. 15—		Dec. 15, 1927	Jan. 15, 1928	
		1913	1926						1913	1926			
Sirloin steak	Pound	Cts. 22.0	Cts. 33.1	Cts. 35.7	Cts. 38.6	Cts. 33.6	Cts. 36.8	Cts. 37.5	Cts. 25.0	Cts. 45.6	Cts. 48.2	Cts. 49.2	
Round steak	do	20.0	28.6	32.3	35.7	32.9	35.9	36.7	21.4	38.9	41.6	43.0	
Rib roast	do	18.0	25.9	29.4	31.6	23.7	25.2	25.0	20.3	34.2	34.4	35.7	
Chuck roast	do	15.2	18.6	22.9	25.7	21.2	23.1	23.3	15.6	24.0	26.5	26.6	
Plate beef	do	11.7	14.5	16.7	19.7	13.8	15.6	16.4	10.7	13.4	15.0	15.9	
Pork chops	do	23.4	38.3	37.8	38.4	33.1	27.5	26.7	20.3	39.5	32.2	32.8	
Bacon, sliced	do	30.0	55.6	55.4	56.2	46.5	44.5	43.8	23.0	46.2	43.0	42.1	
Ham, sliced	do	28.3	57.5	58.2	59.6	51.3	46.8	48.8	28.2	58.3	56.5	55.8	
Lamb, leg of	do	18.6	37.3	35.3	36.7	39.1	37.5	36.7	19.3	43.4	38.5	38.9	
Hens	do	24.3	35.5	32.9	32.9	35.1	33.6	34.5	20.6	41.0	38.2	40.1	
Salmon, canned, red	do	37.2	37.2	35.3	35.5	40.5	35.7	35.4	—	37.6	31.9	34.0	
Milk, fresh	Quart	9.1	12.7	12.0	12.0	12.5	14.4	14.4	9.0	15.0	15.0	15.0	
Milk, evaporated	15-16 oz. can	—	10.8	10.5	10.5	11.9	11.8	12.0	—	12.0	12.1	12.0	
Butter	Pound	44.6	54.7	57.7	56.8	51.7	58.7	57.0	43.4	59.2	61.7	61.0	
Oleomargarine (all butter substitutes).	do	—	32.1	26.0	25.7	32.8	28.2	28.5	—	31.3	28.5	27.4	
Cheese	do	21.6	37.0	35.4	36.7	37.3	39.3	38.9	22.8	39.0	41.4	41.2	
Lard	do	17.8	24.2	20.9	21.2	21.9	18.5	18.2	14.2	20.5	17.8	17.0	
Vegetable lard substitute.	do	—	28.6	26.9	27.2	28.3	27.7	27.5	—	24.7	25.1	23.7	
Eggs, strictly fresh	Dozen	39.0	41.1	47.6	42.9	52.1	50.1	55.9	33.1	59.1	65.0	59.5	
Eggs, storage	do	32.5	—	41.5	37.5	42.5	41.4	43.7	25.0	44.6	46.5	48.3	
Bread	Pound	6.0	9.7	9.7	9.7	10.1	10.3	10.3	5.7	8.2	9.1	9.0	
Flour	do	2.8	5.5	4.6	4.8	6.4	5.3	5.2	3.8	6.7	5.6	5.6	
Corn meal	do	3.1	5.3	5.5	5.5	5.0	4.8	4.8	2.6	5.3	5.5	5.1	
Rolled oats	do	—	9.1	8.6	8.6	10.2	10.1	9.6	—	9.3	9.4	9.3	
Corn flakes	8-oz. pkg.	—	12.0	10.2	10.0	11.6	10.2	10.1	—	10.6	9.5	9.6	
Wheat cereal	28-oz. pkg.	—	26.8	27.1	26.6	27.2	27.6	27.9	—	24.6	24.3	25.0	
Macaroni	Pound	—	18.4	18.2	18.1	19.2	18.6	19.2	—	23.7	22.5	22.2	
Rice	do	7.7	12.8	11.1	10.9	11.2	11.0	10.6	9.2	12.2	11.2	11.2	
Beans, navy	do	—	10.5	10.2	10.4	9.3	9.3	9.4	—	9.1	9.2	9.2	
Potatoes	do	1.0	4.4	1.9	1.9	6.1	2.6	2.6	1.6	6.6	3.5	3.5	
Onions	do	—	4.6	3.5	4.3	5.9	4.4	4.8	—	6.6	4.5	4.7	
Cabbage	do	—	3.3	3.7	4.6	6.1	3.6	3.5	—	7.3	4.5	5.3	
Beans, baked	No. 2 can	—	14.2	11.8	11.6	11.9	10.2	10.3	—	11.1	10.1	10.2	
Corn, canned	do	—	19.3	17.4	18.0	16.3	15.1	15.0	—	15.6	15.5	16.1	
Peas, canned	do	—	20.6	18.4	19.3	17.5	16.1	16.1	—	16.9	15.6	15.1	
Tomatoes, canned	do	—	18.2	16.1	15.8	13.7	14.0	13.7	—	11.3	10.5	10.8	
Sugar, granulated	Pound	6.1	7.0	7.1	7.0	7.2	7.7	7.7	5.5	6.5	6.7	6.7	
Tea	do	50.0	78.0	76.0	76.4	78.7	84.2	82.7	57.5	87.7	90.4	95.9	
Coffee	do	28.0	52.0	49.9	50.2	53.2	49.7	51.4	28.8	48.7	44.1	45.7	
Prunes	do	—	15.2	12.0	11.7	17.0	14.3	13.9	—	17.4	14.5	14.9	
Raisins	do	—	14.1	13.2	13.2	15.2	14.1	4.2	—	14.2	13.7	13.8	
Bananas	Dozen	13.3	13.0	12.6	10.6	10.1	9.3	9.3	—	34.7	37.0	36.1	
Oranges	do	—	45.0	52.5	49.0	49.5	58.5	53.5	—	40.3	51.5	50.6	

¹ No. 2½ can.² Per pound.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food ³ in January, 1928, compared with the average cost in the year 1913, in January, 1927, and December, 1927. For 12 other cities comparisons are given for the one-year and the one-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are

³ For list of articles see note 5, p. 166.

based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.⁴

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN JANUARY, 1928, COMPARED WITH THE COST IN DECEMBER, 1927, JANUARY, 1927, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percent- age in- crease January, 1928, compared with 1913	Percentage decrease January, 1928, com- pared with—		City	Percent- age in- crease January, 1928, compared with 1913	Percentage decrease January, 1928, com- pared with—	
		January, 1927	Decem- ber, 1927			January, 1927	Decem- ber, 1927
Atlanta.....	58.5	3.3	0.9	Minneapolis.....	52.4	2.1	0.6
Baltimore.....	60.7	3.7	1.0	Mobile.....	52.4	2.7	0.0
Birmingham.....	61.0	3.5	1.1	Newark.....	51.2	0.8	0.9
Boston.....	57.5	1.7	2.5	New Haven.....	56.6	2.8	1.8
Bridgeport.....		1.7	1.4	New Orleans.....	54.5	1.6	1.0
Buffalo.....	58.9	4.1	1.4	New York.....	61.1	0.2	2.0
Butte.....		1.6	0.5	Norfolk.....		3.0	1.6
Charleston, S. C.....	55.3	5.0	0.4	Omaha.....	46.8	5.8	1.1
Chicago.....	65.5	3.5	0.7	Peoria.....		5.9	2.5
Cincinnati.....	57.7	1.7	0.9	Philadelphia.....	61.2	2.2	1.1
Cleveland.....	52.7	4.2	1.3	Pittsburgh.....	58.0	3.5	1.2
Columbus.....		4.7	1.9	Portland, Me.....		1.9	2.2
Dallas.....	56.9	1.0	0.8	Portland, Oreg.....	42.0	1.9	2.2
Denver.....	40.8	2.3	0.1	Providence.....	55.3	2.0	1.0
Detroit.....	61.1	3.3	0.8	Richmond.....	61.7	3.3	0.7
Fall River.....	56.2	0.9	2.2	Rochester.....		1.2	1.2
Houston.....		1.6	0.9	St. Louis.....	57.3	3.3	0.6
Indianapolis.....	49.9	3.2	0.7	St. Paul.....		3.1	1.2
Jacksonville.....	46.0	6.1	0.5	Salt Lake City.....	31.8	2.2	1.4
Kansas City.....	49.9	3.5	0.8	San Francisco.....	51.0	1.5	1.0
Little Rock.....	48.4	3.2	0.1	Savannah.....		3.0	1.0
Los Angeles.....	41.8	3.4	1.1	Scranton.....	63.5	1.5	1.1
Louisville.....	53.5	0.9	0.3	Seattle.....	44.6	1.4	0.8
Manchester.....	51.9	2.5	1.2	Springfield, Ill.....		4.7	0.5
Memphis.....	46.1	2.2	0.4	Washington, D. C.....	62.9	3.2	0.5
Milwaukee.....	55.1	3.9	2.2				

¹Increase.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of January 99 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 40 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages:

Atlanta, Birmingham, Boston, Bridgeport, Buffalo, Butte, Charleston, S. C., Chicago, Cincinnati, Cleveland, Columbus, Denver, Detroit, Fall River, Houston, Indianapolis, Jacksonville, Kansas City, Los Angeles, Louisville, Manchester, Memphis, Milwaukee, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Pittsburgh, Portland, Me., Portland, Oreg., Providence, Rochester, St. Louis, St. Paul, Scranton, Seattle, and Springfield, Ill.

⁴The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the LABOR REVIEW for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, are given in the LABOR REVIEW for March, 1921, p. 26.

The following summary shows the promptness with which the merchants responded in January, 1928:

RETAIL PRICE REPORTS RECEIVED FOR JANUARY, 1928

Item	United States	Geographical division				
		North Atlantic	South Atlantic	North Central	South Central	Western
Percentage of reports received.....	99	99.4	98	99	99	99
Number of cities in each section from which every report was received.....	40	13	4	12	6	5

Retail Prices of Coal in the United States ^a

THE following table shows the average retail prices of coal on January 15 and July 15, 1913, January 15 and December 15, 1927, and January 15, 1928, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JANUARY 15 AND DECEMBER 15, 1927, AND JANUARY 15, 1928

City, and kind of coal	1913		1927		1928
	Jan. 15	July 15	Jan. 15	Dec. 15	Jan. 15
United States:					
Pennsylvania anthracite—					
Stove—					
Average price.....	\$7.99	\$7.46	\$15.66	\$15.45	\$15.44
Index (1913=100).....	103.4	96.6	202.7	199.9	199.6
Chestnut—					
Average price.....	\$8.15	\$7.68	\$15.42	\$15.08	\$15.06
Index (1913=100).....	103.0	97.0	194.5	190.6	190.4
Bituminous—					
Average price.....	\$5.48	\$5.39	\$9.96	\$9.31	\$9.30
Index (1913=100).....	100.8	99.2	183.3	171.3	171.1
Atlanta, Ga.:					
Bituminous.....	\$5.88	\$4.83	\$8.67	\$8.37	\$7.93
Baltimore, Md.:					
Pennsylvania anthracite—					
Stove.....					
Average price.....	17.70	17.24	116.00	116.00	116.00
Index (1913=100).....	17.03	17.49	115.50	115.25	115.25
Chestnut.....			8.32	8.14	8.07
Bituminous.....					
Birmingham, Ala.:					
Bituminous.....	4.22	4.01	8.09	7.79	7.73

¹ Per ton of 2,240 pounds.

^a Prices of coal were formerly secured semiannually and published in the March and September issues. Since July, 1920, these prices have been secured and published monthly.

RETAIL PRICES OF COAL

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TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JANUARY 15 AND DECEMBER 15, 1927, AND JANUARY 15, 1928—Continued

City, and kind of coal	1913		1927		1928
	Jan. 15	July 15	Jan. 15	Dec. 15	Jan. 15
Boston, Mass.:					
Pennsylvania anthracite—					
Stove.....	\$8.25	\$7.50	\$16.50	\$16.25	\$16.25
Chestnut.....	8.25	7.75	16.25	16.00	16.00
Bridgeport, Conn.:					
Pennsylvania anthracite—					
Stove.....			16.00	15.00	14.88
Chestnut.....			16.00	15.00	14.88
Buffalo, N. Y.:					
Pennsylvania anthracite—					
Stove.....	6.75	6.54	13.75	13.97	14.01
Chestnut.....	6.99	6.80	13.37	13.57	13.61
Butte, Mont.:					
Bituminous.....			11.02	10.95	10.89
Charleston, S. C.:					
Bituminous.....	¹ 6.75	¹ 6.75	11.00	11.00	11.00
Chicago, Ill.:					
Pennsylvania anthracite—					
Stove.....	8.00	7.80	17.00	16.95	16.95
Chestnut.....	8.25	8.05	16.80	16.46	16.46
Bituminous.....	4.97	4.65	9.85	9.17	9.21
Cincinnati, Ohio:					
Bituminous.....	3.50	3.38	7.89	7.08	7.08
Cleveland, Ohio:					
Pennsylvania anthracite—					
Stove.....	7.50	7.25	15.40	15.20	15.20
Chestnut.....	7.75	7.50	15.05	14.80	14.80
Bituminous.....	4.14	4.14	9.73	9.01	9.00
Columbus, Ohio:					
Bituminous.....			7.75	7.24	7.21
Dallas, Tex.:					
Arkansas anthracite—					
Egg.....			16.00	15.50	15.75
Bituminous.....	8.25	7.21	13.22	12.70	12.70
Denver, Colo.:					
Colorado anthracite—					
Furnace, 1 and 2 mixed.....	8.88	9.00	16.00	16.10	16.00
Stove, 3 and 5 mixed.....	8.50	8.50	16.50	16.10	16.00
Bituminous.....	5.25	4.88	10.73	10.58	10.50
Detroit, Mich.:					
Pennsylvania anthracite—					
Stove.....	8.00	7.45	16.17	16.00	16.00
Chestnut.....	8.25	7.65	15.75	15.50	15.50
Bituminous.....	5.20	5.20	10.34	9.31	9.31
Fall River, Mass.:					
Pennsylvania anthracite—					
Stove.....	8.25	7.43	16.75	16.75	16.75
Chestnut.....	8.25	7.61	16.25	16.25	16.25
Houston, Tex.:					
Bituminous.....			13.50	12.80	12.80
Indianapolis, Ind.:					
Bituminous.....	3.81	3.70	7.67	7.28	7.27
Jacksonville, Fla.:					
Bituminous.....	7.50	7.00	14.00	14.00	14.00
Kansas City, Mo.:					
Arkansas anthracite—					
Furnace.....			14.50	14.20	14.10
Stove No. 4.....			15.83	15.33	15.33
Bituminous.....	4.39	3.94	7.81	7.50	7.50
Little Rock, Ark.:					
Arkansas anthracite—					
Egg.....			14.00	13.50	13.50
Bituminous.....	6.00	5.33	10.80	10.55	10.60
Los Angeles, Calif.:					
Bituminous.....	13.52	12.50	16.50	16.50	16.50
Louisville, Ky.:					
Bituminous.....	4.20	4.00	8.42	7.50	7.46
Manchester, N. H.:					
Pennsylvania anthracite—					
Stove.....	10.00	8.50	17.50	17.50	17.50
Chestnut.....	10.00	8.50	17.50	17.25	17.25
Memphis, Tenn.:					
Bituminous.....	¹ 4.34	¹ 4.22	8.80	8.30	8.33

¹ Per ton of 2,240 pounds.

² Per 10-barrel lot (1,800 pounds).

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JANUARY 15 AND DECEMBER 15, 1927, AND JANUARY 15, 1928—Continued

City, and kind of coal	1913		1927		Jan. 15, 1928
	Jan. 15	July 15	Jan. 15	Dec. 15	
Milwaukee, Wis.:					
Pennsylvania anthracite—	\$8.00	\$7.85	\$16.80	\$16.65	\$16.65
Chestnut.....	8.25	8.10	16.65	16.20	16.20
Bituminous.....	6.25	5.71	11.32	9.48	9.48
Minneapolis, Minn.:					
Pennsylvania anthracite—					
Stove.....	9.25	9.05	18.10	18.15	18.15
Chestnut.....	9.50	9.30	17.75	17.70	17.70
Bituminous.....	5.89	5.79	11.75	11.72	11.72
Mobile, Ala.:					
Bituminous.....			10.12	9.71	9.54
Newark, N. J.:					
Pennsylvania anthracite—					
Stove.....	6.50	6.25	14.00	14.00	14.00
Chestnut.....	6.75	6.50	13.50	13.50	13.50
New Haven, Conn.:					
Pennsylvania anthracite—					
Stove.....	7.50	6.25	15.40	15.10	15.10
Chestnut.....	7.50	6.25	15.40	15.10	15.10
New Orleans, La.:					
Bituminous.....	¹ 6.06	¹ 6.06	11.29	11.29	11.29
New York, N. Y.:					
Pennsylvania anthracite—					
Stove.....	7.07	6.66	14.75	14.75	14.75
Chestnut.....	7.14	6.80	14.50	14.42	14.42
Norfolk, Va.:					
Pennsylvania anthracite—					
Stove.....			16.00	15.00	15.00
Chestnut.....			16.00	15.00	15.00
Bituminous.....			9.68	9.07	9.05
Omaha, Nebr.:					
Bituminous.....	6.63	6.13	10.19	10.21	10.26
Peoria, Ill.:					
Bituminous.....			7.29	7.12	7.10
Philadelphia, Pa.:					
Pennsylvania anthracite—					
Stove.....	¹ 7.16	¹ 6.89	¹ 15.70	¹ 15.04	¹ 14.93
Chestnut.....	¹ 7.38	¹ 7.14	¹ 15.54	¹ 14.54	¹ 14.43
Pittsburgh, Pa.:					
Pennsylvania anthracite—					
Chestnut.....	¹ 8.00	¹ 7.44	15.88	14.88	14.88
Bituminous.....	¹ 3.16	¹ 3.18	6.24	5.69	5.65
Portland, Me.:					
Pennsylvania anthracite—					
Stove.....			16.80	16.80	16.80
Chestnut.....			16.80	16.80	16.80
Portland, Oreg.:					
Bituminous.....	9.79	9.66	13.34	13.39	13.22
Providence, R. I.:					
Pennsylvania anthracite—					
Stove.....	⁴ 8.25	⁴ 7.50	⁴ 16.50	⁴ 16.25	⁴ 16.25
Chestnut.....	⁴ 8.25	⁴ 7.75	⁴ 16.50	⁴ 16.00	⁴ 16.00
Richmond, Va.:					
Pennsylvania anthracite—					
Stove.....	8.00	7.25	16.50	15.67	15.50
Chestnut.....	8.00	7.25	16.50	15.50	15.50
Bituminous.....	5.50	4.94	11.66	9.75	9.70
Rochester, N. Y.:					
Pennsylvania anthracite—					
Stove.....			14.60	14.60	14.60
Chestnut.....			14.15	14.15	14.15
St. Louis, Mo.:					
Pennsylvania anthracite—					
Stove.....	8.44	7.74	17.45	16.90	16.90
Chestnut.....	8.68	7.99	17.20	16.45	16.45
Bituminous.....	3.36	3.04	7.50	7.14	7.02
St. Paul, Minn.:					
Pennsylvania anthracite—					
Stove.....	9.20	9.05	18.10	18.15	18.15
Chestnut.....	9.45	9.30	17.75	17.70	17.70
Bituminous.....	6.07	6.04	12.16	11.98	11.98

¹ Per ton of 2,240 pounds.

² Per 10-barrel lot (1,800 pounds).

³ Per 25-bushel lot (1,900 pounds).

⁴ The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, JANUARY 15 AND DECEMBER 15, 1927, AND JANUARY 15, 1928—Continued

City, and kind of coal	1913		1927		Jan. 15, 1928
	Jan. 15	July 15	Jan. 15	Dec. 15	
Salt Lake City, Utah:					
Colorado anthracite—					
Furnace, 1 and 2 mixed.....	\$11.00	\$11.50	\$18.00	\$18.00	\$18.00
Stove, 3 and 5 mixed.....	11.00	11.50	18.00	18.00	18.00
Bituminous.....	5.64	5.46	8.47	8.32	8.34
San Francisco, Calif.:					
New Mexico anthracite—					
Cerrojos egg.....	17.00	17.00	26.50	26.50	26.50
Colorado anthracite—					
Egg.....	17.00	17.00	25.75	25.75	25.75
Bituminous.....	12.00	12.00	17.11	17.25	17.25
Savannah, Ga.:					
Bituminous.....			\$ 13.25	\$ 11.13	\$ 11.13
Scranton, Pa.:					
Pennsylvania anthracite—					
Stove.....	4.25	4.31	11.00	10.75	10.75
Chestnut.....	4.50	4.56	10.67	10.50	10.50
Seattle, Wash.:					
Bituminous.....	7.63	7.70	10.47	10.06	10.18
Springfield, Ill.:					
Bituminous.....			4.38	4.44	4.44
Washington, D. C.:					
Pennsylvania anthracite—					
Stove.....	17.50	17.38	115.86	115.51	115.51
Chestnut.....	17.65	17.53	115.54	115.01	115.01
Bituminous—					
Prepared sizes, low volatile.....			112.00	111.00	111.00
Prepared sizes, high volatile.....			19.75	18.75	18.75
Run of mine, mixed.....			18.31	17.88	17.88

¹ Per ton of 2,240 pounds.

² All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

Index Numbers of Wholesale Prices in January, 1928

WHOLESALE prices in January averaged slightly lower than in December, according to information collected in representative markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, computed on prices in the year 1926 as the base and including 550 commodities or price series, stands at 96.3 for January as compared with 96.8 for December, a decrease of one-half of 1 per cent. Compared with January, 1927, with an index number of 96.6, a decrease of one-third of 1 per cent is shown.

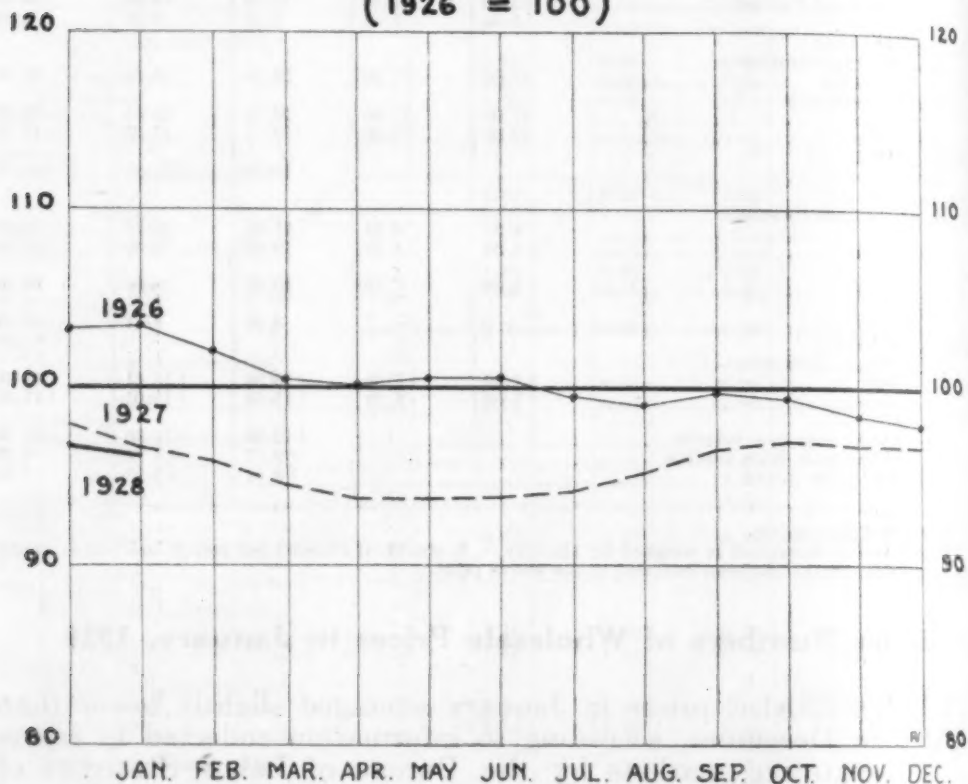
Farm products as a group advanced over $1\frac{1}{2}$ per cent above the December level, due to price increases for grains, cattle, poultry, tobacco, onions, potatoes, and wool. Hogs, lambs, and cotton, on the other hand, were cheaper than in December.

Foods as a whole declined over 2 per cent, due mainly to price decreases in dairy products and meats. Hides and leather products again advanced sharply, while building materials showed a minor increase. In all other groups of commodities, except miscellaneous, decreases were recorded, ranging from less than one-half of 1 per cent in the case of metals and metal products and house-furnishing goods to 2 per cent in the case of fuel and lighting. No change in the price level is shown for the group of miscellaneous commodities.

Of the 550 commodities or price series for which comparable information for December and January was collected, increases were shown in 166 instances and decreases in 135 instances. In 249 instances no change in price was reported.

Comparing prices in January with those of a year ago, as measured by changes in the index numbers, it is seen that farm products and

TREND OF WHOLESALE PRICES. (1926 = 100)



hides and leather products were considerably higher, while foods, textile products, and house-furnishing goods were somewhat higher. Fuel and lighting materials, owing to large decreases in bituminous coal, coke, and petroleum products, were 17 per cent cheaper than in January, 1927. Small decreases are shown for metals and metal products, chemicals and drugs, and miscellaneous commodities, and a larger decrease for building materials.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Commodity groups and subgroups	1927, January	1927, December	1928, January	Purchasing power of the 1926 dollar in January, 1928 (cents)
Farm products.....	96.5	104.4	106.1	94.3
Grains.....	95.9	102.0	104.7	95.5
Livestock and poultry.....	98.5	97.9	100.2	99.8
Other farm products.....	95.4	109.7	110.7	90.3
Foods.....	96.9	100.7	98.5	101.5
Butter, cheese, and milk.....	105.4	110.0	108.6	92.1
Meats.....	89.4	99.6	91.6	109.2
Other foods.....	98.8	97.7	99.0	101.0
Hides and leather products.....	101.0	116.9	121.0	82.6
Hides and skins.....	105.5	136.4	151.4	66.1
Leather.....	99.6	122.4	123.8	80.8
Boots and shoes.....	99.8	107.1	108.4	92.3
Other leather products.....	101.2	109.4	108.4	92.3
Textile products.....	94.3	97.2	96.7	103.4
Cotton goods.....	92.1	103.3	102.3	97.8
Silk and rayon.....	90.1	83.2	83.7	119.5
Woolen and worsted goods.....	98.2	98.4	99.0	101.0
Other textile products.....	99.9	96.7	90.4	110.6
Fuel and lighting.....	97.7	82.5	80.8	123.8
Anthracite coal.....	99.1	96.8	94.8	105.5
Bituminous coal.....	103.9	97.4	94.9	105.4
Coke.....	97.4	91.9	86.0	116.3
Manufactured gas.....	99.0	96.2	(1)	
Petroleum products.....	93.0	66.2	65.6	152.4
Metals and metal products.....	98.8	98.4	98.1	101.9
Iron and steel.....	99.2	93.7	93.9	106.5
Nonferrous metals.....	94.8	92.3	91.7	109.1
Agricultural implements.....	99.4	98.8	98.8	101.2
Automobiles.....	99.9	104.6	104.3	95.9
Other metal products.....	99.5	100.7	98.2	101.8
Building materials.....	97.5	90.4	90.8	110.1
Lumber.....	96.7	88.0	88.5	113.0
Brick.....	98.3	92.2	92.4	108.2
Cement.....	98.3	96.5	96.5	103.6
Structural steel.....	102.1	91.9	91.9	108.8
Paint materials.....	96.0	86.5	88.0	113.6
Other building materials.....	97.7	92.5	92.7	107.9
Chemicals and drugs.....	97.6	97.2	96.3	103.8
Chemicals.....	98.0	102.2	102.4	97.7
Drugs and pharmaceuticals.....	91.3	81.9	72.6	137.7
Fertilizer materials.....	99.1	95.0	94.8	105.5
Fertilizers.....	100.0	95.2	97.0	103.1
House-furnishing goods.....	97.9	98.8	98.6	101.4
Furniture.....	97.8	97.1	98.2	101.8
Furnishings.....	98.8	99.8	98.8	101.2
Miscellaneous.....	90.3	89.0	89.0	112.4
Cattle feed.....	110.0	128.9	133.1	75.1
Paper and pulp.....	93.0	90.9	90.9	110.0
Rubber.....	80.7	84.2	82.2	121.7
Automobile tires.....	78.6	69.9	69.7	143.5
Other miscellaneous.....	99.6	98.6	98.8	101.2
All commodities.....	96.6	96.8	96.3	103.8

(1) Data not yet available.

Farm Products and Nonagricultural Commodities

THE August, 1924, number of the Labor Review (p. 77) contained a comparison of index numbers of wholesale prices of agricultural and nonagricultural commodities for the period from 1910 to June, 1924, inclusive. It was there explained that this comparison was made at the suggestion of the Department of Agriculture, the grouping of commodities and the adoption of a five-year price base—viz, 1910-1914—being in accordance with this suggestion. Subsequent issues of the Labor Review continued the information to July,

1927. In the present number, page 193, data are given for all months of 1927.

With the revision of the bureau's regular series of wholesale price index numbers and the shift to the 1926 base, a new comparison has been made, contrasting the prices of farm products as classified by this bureau with prices of all other commodities combined into one group and designated as "nonagricultural." This comparison for the period from January, 1923, to January, 1928, is shown below:

INDEX NUMBERS OF WHOLESALE PRICES OF FARM PRODUCTS AND NONAGRICULTURAL COMMODITIES, JANUARY, 1923, TO JANUARY, 1928

[1926=100.0]

Year and month	Farm products	Non-agricultural commodities	Year and month	Farm products	Non-agricultural commodities	Year and month	Farm products	Non-agricultural commodities
1923			1925			1927		
Average for year..	98.6	101.1	Average for year..	109.8	101.8	Average for year..	99.4	94.4
January.....	99.6	102.6	January.....	113.8	100.3	January.....	96.5	96.6
February.....	100.0	104.1	February.....	112.4	102.1	February.....	95.4	96.1
March.....	100.2	105.6	March.....	112.8	102.3	March.....	94.2	94.6
April.....	98.5	105.3	April.....	107.6	100.7	April.....	94.3	93.6
May.....	96.7	103.1	May.....	107.3	100.4	May.....	96.3	93.2
June.....	96.0	101.3	June.....	109.3	101.5	June.....	96.5	93.1
July.....	94.0	99.6	July.....	112.1	102.2	July.....	97.6	93.2
August.....	95.8	98.3	August.....	111.6	101.7	August.....	102.2	93.3
September.....	100.0	99.6	September.....	110.0	101.6	September.....	105.9	94.0
October.....	100.6	99.1	October.....	107.0	102.4	October.....	105.0	94.8
November.....	101.8	97.5	November.....	108.1	103.2	November.....	104.3	94.6
December.....	101.0	97.3	December.....	105.4	102.6	December.....	104.4	94.8
1924			1926			1928		
Average for year..	100.0	97.6	Average for year..	100.0	100.0	January.....	106.1	93.7
January.....	101.4	99.1	January.....	107.4	102.6			
February.....	98.8	100.0	February.....	105.1	101.3			
March.....	95.7	99.3	March.....	101.7	100.1			
April.....	97.3	97.4	April.....	102.8	99.4			
May.....	95.1	96.2	May.....	102.4	100.0			
June.....	94.3	95.1	June.....	100.9	100.4			
July.....	98.6	94.9	July.....	98.6	99.8			
August.....	102.0	95.9	August.....	97.2	99.5			
September.....	100.4	96.4	September.....	99.3	99.8			
October.....	103.2	97.1	October.....	97.0	99.8			
November.....	103.6	98.1	November.....	94.7	99.4			
December.....	108.3	100.0	December.....	94.9	98.7			

Index Numbers of Wholesale Prices, 1913 and 1910-1914 Bases

WITH the end of 1927 the Bureau of Labor Statistics definitely abandoned the practice of measuring changes in wholesale prices from a pre-war basis. Revised index numbers computed on prices in 1926 as the base were announced in September, but in view of the current use being made of the bureau's figures it was found advisable to continue the older computations to the end of the year. These results were not published but were furnished in special form to all persons requesting them.

Complete details for the year 1927 for all of the bureau's former series of index numbers are contained in the three tables which follow. As stated above these computations will not be carried further by the bureau.

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TABLE 1.—INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS AND SUBGROUPS OF COMMODITIES, JANUARY TO DECEMBER, 1927

[1913=100.0]

Month	Farm products				Foods			
	Grains	Live-stock and poultry	Other farm products	All farm products	Butter, cheese, milk	Meats	Other foods	All foods
January.....	140.8	135.7	135.3	137.2	156.6	147.0	149.5	149.6
February.....	139.9	138.8	132.0	136.9	158.9	148.8	145.5	148.2
March.....	136.7	142.2	129.5	136.6	157.3	152.3	142.3	147.1
April.....	136.6	142.2	129.6	136.7	156.4	153.3	142.6	147.3
May.....	151.3	130.7	135.8	137.4	147.6	149.3	148.6	148.0
June.....	157.3	126.6	138.7	138.2	145.8	142.3	149.4	146.4
July.....	153.1	133.6	139.6	140.5	146.1	146.2	146.0	145.5
August.....	152.9	137.3	150.0	146.2	147.6	146.9	146.5	146.2
September.....	144.9	148.5	159.5	152.9	156.2	149.8	148.7	149.8
October.....	141.9	152.8	158.1	153.4	158.8	158.7	150.1	153.3
November.....	142.8	151.6	157.8	153.0	159.9	155.0	152.1	153.7
December.....	145.9	144.7	163.3	153.1	162.4	149.9	150.5	151.9
Average.....	145.4	140.3	144.2	143.5	154.4	150.1	147.7	148.9

Month	Cloths and clothing				
	Boots and shoes	Cotton goods	Woolen goods	Silk, etc.	All cloths and clothing
January.....	184.3	145.4	188.8	141.9	167.3
February.....	184.3	146.3	190.1	148.2	168.7
March.....	184.4	147.3	189.8	143.1	168.4
April.....	184.4	147.4	189.6	148.8	169.1
May.....	184.5	151.7	187.7	144.4	169.6
June.....	184.7	153.9	187.1	139.8	169.6
July.....	187.8	156.3	187.3	134.4	170.8
August.....	188.5	164.5	187.5	131.1	173.4
September.....	192.9	176.2	187.6	130.7	178.6
October.....	193.0	175.0	189.3	130.2	178.6
November.....	193.1	171.2	189.9	124.0	176.7
December.....	193.2	168.0	190.1	128.0	176.3
Average.....	187.8	157.3	188.2	137.0	172.2

Month	Fuel and lighting				Metals and metal products		
	Anthracite coal	Bituminous coal	Other fuel and lighting	All fuel and lighting	Iron and steel	Non-ferrous metals	All metals and metal products
January.....	227.2	213.9	147.9	179.8	134.4	102.2	124.4
February.....	226.8	209.0	145.8	177.1	131.9	100.7	122.2
March.....	221.5	206.0	131.7	168.3	132.0	102.4	122.8
April.....	215.1	205.8	118.3	160.6	131.7	100.2	121.9
May.....	214.6	205.5	113.6	158.2	131.0	97.7	120.6
June.....	217.3	206.6	113.1	158.7	129.9	96.7	119.6
July.....	218.3	205.8	112.9	158.5	129.2	96.1	118.9
August.....	219.4	209.8	109.5	158.3	129.0	99.8	119.9
September.....	221.2	210.9	108.9	158.7	128.3	97.8	118.8
October.....	220.2	205.1	110.9	157.6	127.3	97.0	117.8
November.....	222.1	201.3	109.5	155.9	126.9	97.5	117.7
December.....	221.9	200.5	108.9	155.3	127.3	99.8	118.7
Average.....	220.7	206.6	119.3	162.2	129.9	99.1	120.3

TABLE 1.—INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS AND SUBGROUPS OF COMMODITIES, JANUARY TO DECEMBER, 1927—Continued

[1913=100.0]

Month	Building materials				
	Lumber	Brick	Structural steel	Other building materials	All building materials
January.....	181.4	207.5	132.4	157.7	160.7
February.....	180.1	207.9	129.1	155.2	167.9
March.....	179.0	207.5	125.8	154.5	166.8
April.....	176.2	207.1	125.8	153.6	165.0
May.....	177.2	206.9	125.8	153.7	165.6
June.....	176.2	206.5	122.5	152.4	164.3
July.....	174.2	205.9	117.5	151.1	162.4
August.....	170.8	205.8	119.2	151.2	160.8
September.....	168.5	205.7	120.9	150.0	159.3
October.....	168.2	206.0	119.2	148.3	158.3
November.....	166.3	205.4	115.9	147.1	156.6
December.....	164.0	204.7	119.2	148.2	156.0
Average.....	173.4	206.4	122.8	151.8	162.6

Month	Chemicals and drugs				House-furnishing goods		
	Chemicals	Fertilizer materials	Drugs and pharmaceuticals	All chemicals and drugs	Furniture	Furnishings	All house furnishings
January.....	115.6	105.0	154.4	122.1	137.6	222.4	157.4
February.....	115.5	105.8	153.4	122.0	137.6	222.6	157.5
March.....	113.7	106.4	151.7	120.7	137.6	222.2	157.4
April.....	116.3	105.6	150.6	121.8	137.6	222.2	157.4
May.....	117.3	104.0	150.0	121.9	137.6	222.3	157.4
June.....	117.2	103.8	149.8	121.8	137.6	220.0	157.3
July.....	117.5	101.0	149.1	121.2	137.6	222.3	157.4
August.....	117.6	97.5	150.3	120.9	137.6	224.6	157.9
September.....	119.1	98.8	149.9	121.9	137.6	225.5	158.1
October.....	119.7	100.6	149.2	122.5	137.6	225.4	158.0
November.....	120.3	101.8	148.3	122.8	137.6	227.4	158.5
December.....	120.0	102.2	141.5	121.3	137.6	226.0	158.2
Average.....	117.5	102.3	149.8	121.6	137.6	223.8	157.7

Month	Miscellaneous					All commodities
	Cattle feed	Leather	Paper and pulp	Other miscellaneous	All miscellaneous	
January.....	130.1	136.6	154.8	99.4	117.9	146.9
February.....	138.0	136.7	154.8	99.2	118.5	146.4
March.....	131.6	137.4	154.8	100.2	118.6	145.3
April.....	134.9	137.4	154.8	99.5	118.5	144.2
May.....	140.2	142.2	152.7	100.8	120.2	144.1
June.....	139.8	148.6	152.2	99.5	120.5	143.7
July.....	136.9	157.2	152.2	98.4	121.1	144.6
August.....	149.5	158.9	152.2	97.9	122.3	146.6
September.....	138.8	160.1	152.2	97.1	121.0	149.3
October.....	137.6	161.9	150.9	98.0	121.5	150.1
November.....	145.1	162.7	150.3	99.0	122.8	149.5
December.....	153.6	170.6	150.1	100.2	125.6	149.1
Average.....	139.9	150.9	152.7	99.1	121.2	146.8

TABLE 2.—INDEX NUMBERS OF WHOLESALE PRICES OF RAW MATERIALS, PRODUCERS' GOODS, AND CONSUMERS' GOODS, JANUARY TO DECEMBER, 1927

[1913=100.0]

Month	Raw materials					Producers' goods	Consumers' goods
	Crops	Animal products	Forest products	Mineral products	Total		
January.....	130.5	134.9	184.3	174.6	149.6	124.5	156.9
February.....	130.9	137.8	183.1	172.1	149.9	123.5	156.0
March.....	130.1	140.1	182.0	167.4	149.0	121.8	155.0
April.....	127.8	140.9	179.1	162.5	146.9	120.3	154.9
May.....	138.9	131.7	180.2	161.0	146.3	120.5	155.4
June.....	143.2	129.1	179.3	161.6	146.7	119.9	154.3
July.....	143.9	135.7	177.1	161.1	149.0	119.8	154.1
August.....	153.8	138.7	173.2	163.0	153.1	119.9	155.0
September.....	155.0	148.2	170.5	163.4	156.8	120.0	158.2
October.....	150.0	152.0	170.3	161.4	156.1	119.4	161.4
November.....	147.8	151.2	168.3	160.2	154.7	119.2	161.4
December.....	154.2	146.3	166.4	160.4	154.7	119.6	160.2
Average.....	142.3	140.5	176.0	164.1	151.0	120.7	157.1

TABLE 3.—INDEX NUMBERS OF WHOLESALE PRICES OF AGRICULTURAL AND NON-AGRICULTURAL COMMODITIES, JANUARY TO DECEMBER, 1927

[1910-1914=100.0]

Month	Agricultural commodities	Nonagricultural commodities	All commodities
January.....	142.5	156.3	149.5
February.....	142.9	155.0	149.1
March.....	142.8	152.9	147.9
April.....	142.4	150.1	146.7
May.....	142.8	150.4	146.7
June.....	141.9	150.5	146.3
July.....	143.5	150.7	147.2
August.....	147.2	151.0	149.3
September.....	152.1	151.7	152.0
October.....	153.8	151.5	152.8
November.....	153.3	150.7	152.2
December.....	152.4	150.9	151.8
Average.....	146.4	152.1	149.4

Index Numbers of Wholesale Prices of Raw Materials, Semi-Manufactured Articles, and Finished Products, 1923, to January, 1928

THE May, 1927, issue of the Labor Review contained (pp. 249-253) an explanation of the index numbers of wholesale prices published by the Federal Reserve Board up to the end of 1925 and grouped into raw materials, producers' goods, and consumers' goods. A complete list of the commodities included under each designation was given, together with figures for all months from January, 1913, to March, 1927, inclusive. Comparable information for all months of 1927 will be found in Table 2 above.

The Federal Reserve Board grouping was definitely abandoned by the bureau at the end of 1927 and a rearrangement of commodities into raw materials, semimanufactured articles, and finished products was made. Also, the base period was shifted from the year 1913 to the year 1926 in conformity with the bureau's revised series of

index numbers. The commodities included under the new designations are as follows:

Raw materials.—Barley, corn (2 quotations), oats, rye, wheat (6 quotations), calves, cows (2 quotations), steers (2 quotations), hogs (2 quotations), sheep (3 quotations), poultry (2 quotations), beans, cotton (3 quotations), eggs (7 quotations), apples (3 quotations), lemons, oranges, hay (3 quotations), hops, fluid milk (3 quotations), peanuts, alfalfa seed, clover seed, flaxseed, timothy seed, tobacco, onions, potatoes (4 quotations), sweet potatoes, wool (9 quotations), cocoa beans, coffee (2 quotations), copra, bananas, pepper, hides and skins (7 quotations), raw silk (4 quotations), hemp, jute, sisal, anthracite coal (3 quotations), bituminous coal (3 quotations), crude petroleum (3 quotations), scrap steel, iron ore (2 quotations), crushed stone, gravel, sand, crude sulphur, phosphate rock, nitrate of soda, tankage, rubber (2 quotations). Total, 108 commodities.

Semimanufactured articles.—Oleo oil, raw sugar, vegetable oil (4 quotations), leather (7 quotations), print cloth (2 quotations), cotton yarns (5 quotations), rayon (4 quotations), spun silk (3 quotations), worsted yarns (3 quotations), pig iron (6 quotations), bar iron (2 quotations), skelp, steel billets (2 quotations), merchant steel bars, aluminum, antimony, electrolytic copper, pig lead, nickel, quicksilver, silver, pig tin, slab zinc, barytes, copal gum, linseed oil, rosin, turpentine, vegetable oils (2 quotations), opium, camphor, woodpulp (2 quotations). Total, 62 commodities.

Finished products.—Butter (18 quotations), cheese (3 quotations), milk (2 quotations), fresh beef (2 quotations), cured beef, fresh lamb, fresh mutton, cured pork (5 quotations), fresh pork, poultry (2 quotations), fresh veal, bread (5 quotations), fish (5 quotations), flour (11 quotations), canned fruit (2 quotations), dried fruit (4 quotations), glucose, hominy grits, lard, meal (2 quotations), molasses, oatmeal, oleomargarine, rice (2 quotations), salt (2 quotations), granulated sugar, tallow, tea, canned vegetables (4 quotations), vegetable oil (2 quotations), vinegar, soda crackers, shoes (21 quotations), gloves (2 quotations), harness, suitcases, traveling bags, cotton blankets, denims, drills (2 quotations), duck (2 quotations), flannel (2 quotations), gingham (2 quotations), hosiery (2 quotations), muslin (4 quotations), percale, sheeting (5 quotations), thread, ticking, cotton underwear (2 quotations), silk hosiery (3 quotations), wool blankets, flannel, overcoating (2 quotations), serge suiting (5 quotations), trousering, wool underwear (2 quotations), dress goods (6 quotations), binder twine, burlap, linen shoe thread, rope, coke (4 quotations), manufactured gas, fuel oil (2 quotations), motor gasoline (4 quotations), natural gasoline, kerosene (2 quotations), reinforcing bars, nails, cast-iron pipe, steel plates, steel rails, steel sheets, structural steel, terneplate, tin plate, wire (4 quotations), black steel pipe, brass sheets, sheet copper, copper wire, lead pipe, zinc sheets, agricultural implements (20 quotations), automobiles (6 quotations), sewing machines (2 quotations), cooking stoves (3 quotations), lumber (12 quotations), lath (2 quotations), shingles (2 quotations), brick (4 quotations), cement, bone black, lampblack, litharge, putty, red lead, shellac, lithopone, white lead, zinc oxide, asphalt, plate glass (2 quotations), window glass (2 quotations), hollow tile, lime (2 quotations), slate, acid (8 quotations), alcohol (2 quotations), aluminum sulphate, anhydrous ammonia, bleaching powder, borax, copper sulphite, formaldehyde, sal soda, soda ash, soda bicarbonate, caustic soda, sodium silicate, inedible tallow, calcium arsenate, benzine, toluol, naphthalene flake, anilin oil, white arsenic, salicylic acid, creosote oil, copperas, coal-tar colors (4 quotations), caustic potash, calcium chloride, lime acetate, salt cake, citric acid, tartaric acid, cream of tartar, Epsom salts, glycerine, peroxide of hydrogen, quinine, castor oil, menthol, soda phosphate, zinc chloride, phenol, ethyl alcohol, manure salts, muriate of potash, sulphate of ammonia, ground bones, acid phosphate, sulphate of potash, kainit, mixed fertilizers (6 quotations), furniture (14 quotations), carpets (3 quotations), cutlery (2 quotations), pails, tableware sets (2 quotations), glass nappies, glass pitchers, glass tumblers, plates, teacups and saucers, tubs, cattle feed (4 quotations), box-board (3 quotations), paper (2 quotations), automobile tires (3 quotations), cylinder oil (2 quotations), neutral oil (2 quotations), soap (2 quotations), starch, tobacco (2 quotations). Total, 380 commodities.

The following table gives index numbers of wholesale prices of articles in these groups, by months, from January, 1923, to January, 1928:

INDEX NUMBERS OF WHOLESALE PRICES OF RAW MATERIALS, SEMIMANUFACTURED ARTICLES, AND FINISHED PRODUCTS, JANUARY, 1923, TO JANUARY, 1928

[1926=100.0]

Year and month	Raw materials	Semi-manufactured articles	Finished products	Year and month	Raw materials	Semi-manufactured articles	Finished products
1923				1925—Continued			
Average for year	98.5	118.6	99.5	August	108.0	104.4	101.2
January	102.3	111.6	100.4	September	107.3	105.0	100.7
February	103.2	117.3	101.3	October	106.3	104.5	101.4
March	102.8	125.8	102.6	November	107.4	105.3	102.1
April	100.7	128.3	102.5	December	105.7	104.3	101.5
May	98.1	125.2	101.0	1926			
June	96.5	120.6	99.9	Average for year	100.0	100.0	100.0
July	94.5	116.3	98.5	January	105.9	104.0	102.1
August	95.2	112.2	97.4	February	103.7	103.1	101.0
September	98.0	116.0	98.6	March	100.9	101.0	100.1
October	97.7	117.0	98.1	April	100.6	99.4	99.9
November	97.0	116.5	96.8	May	100.6	98.3	100.7
December	96.6	117.3	96.6	June	100.0	98.5	101.1
1924				July	98.5	98.7	100.2
Average for year	97.6	108.7	97.0	August	97.8	99.6	99.6
January	97.9	115.1	98.6	September	99.3	100.4	99.9
February	98.2	115.6	98.7	October	99.5	99.1	99.3
March	96.5	114.3	97.7	November	98.2	98.9	98.4
April	96.3	110.6	96.2	December	96.9	98.9	98.4
May	94.4	106.3	95.5	1927			
June	93.3	102.8	95.0	Average for year	96.5	96.9	94.5
July	95.9	102.4	94.7	January	97.3	97.8	95.9
August	97.9	105.5	95.6	February	96.0	96.6	95.8
September	97.1	106.0	96.2	March	94.0	96.6	94.6
October	99.3	107.3	96.7	April	92.7	95.9	94.1
November	100.1	108.9	97.6	May	93.9	96.0	93.6
December	103.2	109.7	99.9	June	94.1	95.6	93.4
1925				July	94.7	95.7	93.5
Average for year	106.7	105.3	101.2	August	97.5	97.3	93.4
January	106.9	110.1	99.9	September	99.9	98.6	94.0
February	107.8	109.3	101.4	October	99.5	97.6	95.5
March	108.0	108.0	101.8	November	99.0	97.0	95.3
April	103.9	104.5	100.7	December	99.2	97.7	95.3
May	104.1	102.5	100.4	1928			
June	106.3	102.6	101.2	January	100.2	97.7	93.9
July	109.0	102.9	101.5				

Wholesale Prices in the United States and in Foreign Countries, 1923 to 1927

IN THE following table the more important index numbers of wholesale prices in foreign countries and those of the United States Bureau of Labor Statistics have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the sources from which the information has been drawn, in most cases being the year 1913. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, there are important differences in the composition of the index numbers themselves.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

Country	United States	Canada	Belgium	Bulgaria	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency	Bureau of Labor Statistics (revised)	Dominion Bureau of Statistics	Ministry of Industry and Labor	Director General of Statistics	Central Bureau of Statistics (revised index)	Statistical Department	Central Bureau of Statistics	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi (revised)
Base period	1926	1913	April, 1914	1913	July, 1914	1913	1913	1913	1913	1913
Commodities	550	238	128	38	69	118	135	45	400	100
Year and month										
1923	100.6	153.0	497	2525	977			419		500.9
1924	98.1	155.2	573	2823	997		144	488	137.3	497.4
1925	103.5	160.3	558		1008	210	147	550	141.8	612.0
1926	100.0	156.2	744		955	163	142	703	134.4	618.2
1923										
January	102.2	151.4	434	2657	991			387		516.1
April	104.0	156.9	480	2757	1012			415		525.7
July	98.6	153.5	504	2408	949			407		503.9
October	99.6	153.1	515	2263	960			421		499.6
1924										
January	99.8	156.9	580	2711	974			494		504.4
April	97.6	151.1	555	2798	1008			450		510.3
July	95.9	153.9	566	2737	953			481		497.4
October	98.6	157.0	555	2988	999			497		522.0
1925										
January	103.5	165.5	559	3275	1045	243		514		568.2
February	104.5	164.7	551	3309	1048	240		515		571.1
March	104.8	161.6	546	3272	1034	236		514		571.2
April	102.4	156.5	538	3244	1020	230		513		571.1
May	102.1	158.8	537	3177	1006	227		520		571.2
June	103.4	158.6	552	3225	998	223		543		590.9
July	104.6	158.1	559	3041	1009	212		557		612.0
August	104.2	158.9	567	2870	993	197		557		630.6
September	103.7	156.2	577	2834	996	186		556		621.5
October	103.6	156.0	575	2823	989	179		572		617.1
November	104.5	161.2	569	2822	977	176		605		612.3
December	103.4	163.5	565	2913	977	176		633		613.8
1926										
January	103.6	163.8	560	2901	966	172	143	634	135.8	608.0
February	102.1	162.0	556	2899	950	165	142	636	134.3	603.5
March	100.4	160.0	583	2844	938	158	141	632	133.1	592.3
April	100.1	160.2	621	2774	923	157	141	650	132.7	590.0
May	100.5	156.8	692	2938	928	158	140	688	132.3	595.8
June	100.5	155.6	761	2842	926	157	141	738	131.9	604.9
July	99.5	155.9	876	2838	948	158	141	836	133.1	618.2
August	99.0	154.0	836	2759	963	162	143	769	134.0	632.5
September	99.7	152.5	859	2723	973	162	143	787	134.9	622.0
October	99.4	151.3	856	2716	972	178	143	751	136.2	596.7
November	98.4	151.4	865	2739	978	170	143	684	137.1	594.2
December	97.9	150.5	860	2718	978	158	144	627	137.1	573.6
1927										
January	96.6	150.6	856	2706	979	157	144	622	135.9	558.2
February	95.9	150.1	854	2688	975	156	144	632	135.6	555.8
March	94.5	148.7	858	2649	976	153	143	641	135.0	544.7
April	93.7	148.5	846	2592	979	152	143	636	134.8	521.3
May	93.7	151.9	848	2751	988	152	142	628	137.1	496.2
June	93.8	153.5	851	2823	990	152	144	622	137.9	473.4
July	94.1	152.0	845	2775	992	152	144	620	137.6	466.7
August	95.2	152.3	850	2745	983	153	147	618	137.9	465.4
September	96.5	151.4	837	2736	975	153	148	600	139.7	465.4
October	97.0	142.4	839	2747	966	154	148	588	139.8	467.5
November	96.7	152.2	838		967	154	148	594	140.1	466.0
December	96.8	151.9	841		975	154	148	604	139.6	

¹ 236 commodities since April, 1924.² July.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Dr. J. Lorenz	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office (revised)	Office of Census and Statistics	Bank of Japan, Tokyo	Bureau of Markets, Treasury Department, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	^a 48	174	74	160	71	150	92	180	187	56	^a 117	42
Year and month												
1923	151	232	172	163	179.9	158.9	170	158	127	199	156.4	181
1924	156	267	183	162	175.7	166.2	165	165	129	206	153.9	182
1925	155	253	188	161	162.9	159.1	162	161	128	202	159.4	163
1926	145	198	181	149	148.2	148.1	161	155	123	179	164.1	149
1923												
January	157	223	170	163	174.7	157.0	163		131	184	152.7	181
April	156	229	174	168	185.9	162.0	167		126	196	157.7	180
July	145	231	170	162	179.8	156.5	180		124	192	155.4	178
October	148	235	171	161	181.1	158.1	171		125	212	156.1	181
1924												
January	156	251	178	161	183.2	165.4	174		131	211	155.8	188
April	154	263	184	161	181.4	164.7	166		126	207	153.7	184
July	151	265	182	157	173.3	162.6	163		125	195	151.5	184
October	161	273	186	167	169.0	170.0	163		133	213	152.8	181
1925												
January	160	279	191	169	170.8	171.1	163	166	130	214	159.9	173
February	158	281	192	169	170.8	168.9	162	162		210	159.2	173
March	155	279	193	168	169.9	166.3	160	162		204	160.3	171
April	151	273	190	163	165.9	161.9	158	162	130	202	159.3	165
May	151	262	191	162	163.0	158.6	159	162		199	157.8	164
June	153	260	187	161	161.9	157.2	162	162		200	157.3	160
July	155	254	188	161	160.6	156.9	162	161	127	198	162.8	158
August	155	249	184	159	159.6	156.2	162	161		200	160.3	160
September	155	237	185	157	159.4	155.1	162	160		201	160.2	157
October	154	223	187	154	159.2	153.9	163	162	124	200	159.0	158
November	154	220	186	155	157.0	152.7	165	161		198	158.4	160
December	155	220	187	156	156.7	152.1	160	160		194	158.1	154
1926												
January	153	214	186	153	155.5	151.3	161	159	124	192	164.0	154
February	149	211	186	152	154.5	148.8	160	159		188	163.0	151
March	145	205	183	149	150.8	144.4	163	157		184	164.4	150
April	143	199	179	150	148.4	143.6	168	156	120	181	162.8	151
May	143	197	179	151	146.6	144.9	167	156		177	159.7	151
June	144	194	177	150	145.1	146.4	163	155		177	155.8	150
July	141	192	178	148	145.0	148.7	162	156	122	179	156.9	149
August	139	193	180	147	145.5	149.1	162	154		177	160.5	148
September	140	193	178	146	146.0	150.9	158	153		176	164.2	149
October	143	198	179	148	145.3	152.1	154	153	127	174	171.1	147
November	147	199	185	148	146.9	152.4	155	151		171	174.4	146
December	147	184	186	150	148.3	146.1	155	153		170	172.0	146
1927												
January	145	174	184	146	146.5	143.6	154	151	128	170	172.8	146
February	146	172	180	146	145.4	142.6	153	147		171	172.0	148
March	144	167	179	145	146.7	140.6	150	147		171	174.7	146
April	143	164	177	143	146.5	139.8	151	147	126	170	173.1	145
May	145	162	172	145	147.1	141.1	152	145		171	171.3	146
June	149	166	171	146	147.2	141.8	155	146		172	169.3	147
July	151	165	168	146	147.0	141.1	161	146	120	170	171.0	147
August	149	167	168	146	147.2	140.9	165	146		167	170.8	148
September	150	167	169	148	147.9	142.1	170	146		169	171.8	148
October	150	165	169	147	148.3	141.4	173	146	122	170	168.7	146
November	152	166	168	148	148.9	141.1	166	147		168	165.8	144
December	152	166		148	150.1	140.4		148		168	163.5	

^a 52 commodities in 1920; 53 commodities from August, 1920, to December, 1921.^a 147 items.

New Index of Wholesale Distribution of Federal Reserve Board

A NEW index of distribution of commodities at wholesale has been announced by the Federal Reserve Board, superseding that published since 1923. Among the characteristics distinguishing the new index from the old are (1) a more recent and broader base period (viz, 1923-1925), (2) the inclusion of several additional lines, (3) the addition of a number of firms not previously included, and (4) the use of more satisfactory weights in forming the composite index. The new index also is adjusted for seasonal variations.

Distribution of reporting firms and cities included in the revised index is as follows: Groceries, 362 firms in 213 cities; meats, 61 firms in 51 cities; dry goods, 146 firms in 84 cities; men's clothing, 13 firms in 5 cities; women's clothing, 40 firms in 1 city; boots and shoes, 89 firms in 52 cities; hardware, 186 firms in 114 cities; drugs, 92 firms in 60 cities; and furniture, 87 firms in 36 cities. The total amount of sales of these firms in 1925 was \$3,515,838,000.

The successive steps taken in computing the index are summarized as follows:

(1) Monthly sales, as reported in each line, were totaled by Federal reserve districts and the district totals were combined to obtain for each line a total for the country as a whole.

(2) Average monthly sales in each line were computed for the year 1925 by districts and for the country as a whole.

(3) Monthly sales as reported for each month of the period covered were divided by the average of monthly sales in 1925 for identical firms to obtain a series of relatives for each line of trade by districts and for the country as a whole on 1925 as a base. For early years, when the number of reporting firms was smaller than in 1925, the base as originally computed was adjusted by subtracting the 1925 sales of firms not reporting in the earlier years, leaving in the base the identical firms that reported in 1925 and in the month for which the relative was computed.

(4) Averages of these relatives, by lines, for each district and for the country as a whole, for the three years, 1923-1925, were computed and used as 100 for constructing the final index by lines, which was done by dividing the monthly relatives on the 1925 base by the corresponding average of the relatives for the three years.

(5) Relatives for each line, on the 1923-1925 base, were adjusted for seasonal variations.

(6) These relatives by lines, unadjusted and adjusted for seasonal variations, computed by using 1923-1925 as 100, were multiplied by their respective weights.

(7) The weighted relatives for each line were totaled and their sum was divided by the sum of the weights, the quotient being the final index number of wholesale distribution.

Food Costs in Ecuador

THE following table, showing the average prices of specified food articles in the capital of Ecuador and in Guayaquil, one of the larger cities, is taken from the January, 1928, issue of the Pan American Union Bulletin (English edition, p. 85). The report states that the cost of living in the interior and smaller towns is approximately 20 per cent less than in these cities.

Bread...
Potatoes...
Flour...
Sugar...
Coffee...
Beef...
Ham...
Lamb...
Fish...
Beans...
Green p...
Onions...
Grapes...
Apples...
Oranges...
Eggs...
Chicken...

AVERAGE PRICES OF SPECIFIED FOODSTUFFS IN QUITO AND GUAYAQUIL,
ECUADOR

[The exchange rate of the sucre is given at 20 cents]

Article	Quito			Guayaquil		
	Unit	Average price in—		Unit	Average price in—	
		Sucres	U. S. currency		Sucres	U. S. currency
Bread.....	Loaf.....	0.20	\$0.04	Pound.....	0.60	\$0.12
Potatoes.....	Pound.....	.10	.02	do.....	.15	.03
Flour.....	do.....	1.34	.27	do.....	.30	.06
Sugar.....	do.....	.22	.04	do.....	.25	.05
Coffee.....	do.....	1.00	.20	do.....	.90	.18
Beef.....	do.....	.40-.50	.08-.10	do.....	.55	.11
Ham.....	do.....	1.50	.30	do.....	3.00	.60
Lamb chops.....	do.....	.30-.40	.06-.08	do.....	.30	.06
Fish.....	do.....	2.00	.40	do.....	1.00	.20
Beans.....	do.....	.30	.06	do.....	.30	.06
Green peas.....	do.....	.05	.01	do.....	.40	.08
Onions.....	do.....	.20	.04	do.....	.60	.12
Grapes.....	do.....	.60-.80	.12-.16	do.....	1.20	.24
Apples.....	Each.....	.05-.15	.01-.03	do.....	.40	.08
Oranges.....	do.....	.05	.01	Each.....	.05	.01
Eggs.....	15.....	2.00	.40	do.....	.15	.03
Chickens.....	Each.....	1.50-2.00	.30-.40	do.....	2.50-4.00	.50-.80

COST OF LIVING

Family Budget Investigation in Japan¹

A FAMILY budget inquiry was carried on by the Japanese Government from September 1, 1926, to August 31, 1927. The object of the investigation was to secure data on actual living conditions which would be of value in formulating the Empire's social policy.

Of the 7,856 families of various classes of workers which were selected for inclusion in the inquiry, 6,506 families, or 83 per cent, completed their budgetary statements for the year. While the full findings are not yet available, the following figures for September, 1926, were given recently in an interim report:

The salaried worker's average total income per month was 114 yen;² 98 yen, or 86 per cent, was the family income earned by services, while the remainder came from other sources such as property, etc. The manual worker's total average income per month was 94 yen, of which 86 yen, or 91 per cent, was for services rendered.

Expenditures are classified under three heads: (1) Expenses for every-day necessities (food, lodging, and clothing); (2) "social" expenses, in which are included maintenance of health, the rearing and education of children, travel, and taxes; and (3) cultural expenses, which include servants' wages.

The table below shows the average amounts expended for the different items of the family budgets of both salaried and manual workers for the month of September, 1926, together with the percentages such items form of the total budgets:

FAMILY BUDGETS OF SALARIED WORKERS AND MANUAL WORKERS IN JAPAN, SEPTEMBER, 1926

[Yen at par = 49.85 cents; average exchange rate for September, 1926 = 48.4 cents]

Item	Average expenditures of—					
	Salaried workers			Manual workers		
	Amount		Per cent of total	Amount		Per cent of total
	Yen	U. S. currency		Yen	U. S. currency	
Clothing.....	12.43	\$6.02	10.89	8.66	\$4.19	10.30
Food.....	40.97	19.83	35.90	36.58	17.70	43.36
Lodging.....	26.54	12.85	23.25	17.26	8.35	20.32
Total for daily necessities.....	79.94	38.69	70.04	62.50	30.25	74.32
Social.....	16.68	8.07	14.61	10.40	5.03	12.37
Cultural.....	17.51	8.47	15.35	11.20	5.42	13.31
Grand total.....	114.13	55.24	100.00	84.10	40.70	100.00

¹ International Labor Office. Industrial and Labor Information, Geneva, Dec. 26, 1927, p. 410.

² Yen at par = 49.85 cents; average for September, 1926 = 48.4 cents.

LABOR AGREEMENTS, AWARDS, AND DECISIONS

Awards and Decisions

Railroads—Pere Marquette Railway

A DISPUTE between the Pere Marquette Railway Co. and its locomotive engineers and firemen, conductors, trainmen, and switchmen was ended by a somewhat lengthy decision filed January 10, 1928, by a board of arbitration consisting of Alfred J. Murphy, appointed by the United States Board of Mediation, A. L. Grandy representing the carriers, and C. S. Montooth representing the various brotherhoods interested.

The sole issue between the parties was "the determination of an effective date for the establishment of wage increases agreed to between the parties."

The facts were as follows: Twenty-one carriers operating in the same territory as the Pere Marquette had in pursuance of an award, granted their conductors, trainmen, and switchmen, a 7½ per cent increase in wages December 1, 1926, and 19 carriers had granted their firemen the same increase February 1, 1927. The Pere Marquette, with several other carriers, was not a party to either agreement. But the Pere Marquette of its own volition, April 8, 1927, granted the same increase in wages to similar employees on its own lines, effective April 16, 1927.

The organizations representing the employees on the Pere Marquette contended that this increase should start from December 1, 1926, and February 1, 1927, respectively, the dates that the increases took effect upon the other lines, since employees working in the same geographical district should receive a rate of increase at the same time, and common carriers operating in the same field should be subjected to the same costs of operation, and because the carrier was dilatory in dealing with their requests, closing with the statement "that a fair consideration of all the equities arising requires the retroactive payment requested."

The carrier on the other hand charged the employees with delay in dealing with its grievance, that not being a party to the arbitration of December 1, 1926, or the mediation of February 1, 1927, it should not be compelled to accept the results of those proceedings, "and that to grant the requests for back pay would be to penalize it for installing a wage increase which was not compulsory, but which it voluntarily granted."

The board gave an extended review of the matter, saying among other things, the following:

It is said by the employees that the April, 1926, increase was made in violation of the schedules of agreement. In a very narrow sense this is true. But it is an

interpretation which should be rejected. No obstacle should be placed in the way of the employer to grant, without conference, any improvement in wages. The schedules provide a remedy by which no disadvantage may be worked upon the employee without first recourse to conference. If such recourse be a prerequisite when an increase is desired to be given voluntarily, some delay would necessarily be involved and the advantages of the increase for the time withheld. The true construction to be given the rule is that the increase of April, 1926, though made without conference did not violate the spirit or negative the purpose of the existing schedules.

It is clear that some of the roads within the eastern territory are more advantageously situated for profitable operation than the Pere Marquette. Some are less so. The record discloses that the Grand Trunk Western probably furnishes the most nearly just basis of comparison with the Pere Marquette.

The Grand Trunk Western applied the December, 1926, arbitration agreement upon the same day which the Pere Marquette did, namely, April 16, 1927. It did not, however, apply the mediation award of February, 1927, until June 1, 1927, or six weeks later than did the Pere Marquette.

Nothing has as yet been said as to the increase given by the Pere Marquette to engineers as of April 16, 1927. With the exception of the Canadian Pacific, which made the engineers' increase applicable July 1, 1927, none of the other roads in the eastern district put it into operation before August 1, 1927. Four of them made it operative at dates subsequent to August 1, 1927, and six of them have never made it operative at all. Thus it will be seen that the increase given by the Pere Marquette to engineers preceded that of any of the other thirty-five roads in the eastern territory.

Speaking as a whole of the requests for wage increases made in 1926, there was a failure upon the part of both employer and employee properly to carry out the obligation thus placed upon them by the Congress of the United States. This is said notwithstanding the conference had with the representatives of the conductors and the trainmen concerning their request. * * * There had been during the year 1926, in view of the provisions of the railway labor act, unjustifiable inaction on both sides.

Turning next to the wage claims filed by the employees under their interpretations of the working schedules, and included within the 114 typical cases, what do we find? The employees said these claims were just. The company took the contrary view. The situation grew aggravated. Neither side, as was its statutory duty, complied either with the spirit or the letter of the very law which Congress had enacted to prevent such situations becoming acute. In consequence, so high had feeling run that, the employees viewing the railway company as willful and the company holding its men to be unreasonable, the carrier found itself upon May 18, 1927, upon the verge of an immediate strike of its operating forces.

True it is that in March, 1927, two years after they began to arise, the United States Mediation Board was called in by the employees to mediate these wage claims. In an effort to appease the situation the company granted the increase of April, 1927. Later to avert the strike which was ordered, it paid the claims in full, its president then saying they would be paid, "right or wrong."

The employees, in March, 1927, offered to submit the disputed interpretations to the eastern train service board, composed of representatives of the Boston & Maine, the New York Central lines, and the Baltimore & Ohio Railway Co. This being refused, they offered also to refer the matter to the western train service board, the southern train service board, and to certain designated officials of other railroads. The company refused all of these offers. Its reply was that any such proposed tribunal would be composed of persons not familiar with the operating conditions upon the Pere Marquette lines. It was contending throughout for the creation of a board of adjustment made up of men exclusively from the Pere Marquette system. The employees, on the other hand, refused such a proposal, and contended for a board of adjustment made up at least in part of men from other lines. Thus an impasse was created.

It should be borne in mind that these wage claims due to different interpretations had been growing in number since the beginning of the year 1925. Two years had passed, only to aggravate the situation. Interviews were had without avail. But neither side invoked the remedy open under the railway labor act until March, 1927, when the employees, as above stated, obtained the intervention of the United States Mediation Board.

Meanwhile, the demand for increases of pay had arisen. They began as above stated, in February, 1926. Thus these two situations continued, side by side,

throughout the year 1926 without proper effort upon either side for the adequate application of the railway labor act. This was a failure to show such compliance with that law as the public have the right to expect.

To make the increase retroactive, as the employees desire, would mean an outlay in excess of \$85,000. Giving due weight to all the factors involved, and in the light of the foregoing conclusions, it would be inequitable to impose such a payment upon the company.

Award.—The award of the board is that the increases made by the Pere Marquette Railway, effective as of April 16, 1927, should not be retroactive.

A dissenting opinion was filed by the arbitrator representing the employees.

Street Railways—Chicago

AN AWARD affecting 21,000 employees of the street-railway companies of Chicago connected with Division 241 of the Amalgamated Association of Street and Electric Railway Employees of America was signed January 21, 1928, by a board consisting of Alderman Oscar F. Nelson, representing the employees, and Guy A. Richardson, representing the company. It was approved by Federal Judge James H. Wilkerson January 23, 1928, and made part of the court record, since 60 per cent of the surface lines is under the control of the Federal court.

The award continues until May 31, 1930, the agreement which by its terms was to expire May 31, 1927, but increases the wages of all employees 1 cent per hour from June 1, 1928, through May 31, 1929, and another cent from June 1, 1929, through August 31, 1930.

In addition the following provisions relative to health and accident insurance were added, similar in character to those added by arbitrators to the agreement between the members of Division 308 of the street and electric employees' union and the elevated roads of Chicago, and printed in the *Labor Review*, November, 1926, pages 207, 208.

SECTION 2. Chicago surface lines shall pay to all members of Division 241 in the service of Chicago surface lines on February 1, 1928:

(a) Thirty-five dollars to those who were in such service on June 1, 1927, in lieu of life, sick, and accident insurance; and (b) \$12 to those who entered such service between June 1, 1927, and November 1, 1927, in lieu of life insurance.

This item of the award is made because of the practical impossibility of making insurance retroactive. Therefore, the arbitrators have computed the approximate amount of money it would have cost the Chicago surface lines in case such insurance had been in effect since June 1, 1927.

SEC. 3. For the period beginning February 1, 1928, and thereafter until and including May 31, 1930, the Chicago surface lines shall bear and pay the cost and expense of group life insurance to the amount of \$1,000 upon the life of each employee covered by this agreement who has been in the employ of the Chicago surface lines for three months, while continuing in the service of the Chicago surface lines, subject to the acceptance by the insurance company writing such insurance, of any new employee as a risk.

Chicago surface lines shall also, from February 1, 1928, and thereafter until and including May 31, 1930, bear and pay the cost and expense of a group health policy covering each employee covered by this agreement, who has been in the service of the Chicago surface lines for more than one year, for \$20 per week against becoming, while insured under said policy, wholly and continuously disabled and prevented from performing any and every duty of his or her occupation by sickness contracted or injuries sustained, provided that no indemnity shall be payable for the first 7 days of incapacity nor for more than 26 weeks thereafter. Such group health policy shall not cover the following:

(1) Any period of incapacity for which the employee is not treated by a licensed practicing physician.

(2) Any period of incapacity for which the employee is entitled to indemnity or compensation under any workmen's compensation act, except to the extent

of the difference between such compensation allowance and the \$20 per week provided by such health insurance.

(3) Sickness contracted or suffered or injury sustained outside of the continental limits of the United States, in North America or Canada, or in any part of either, north of the sixtieth degree of north latitude; nor sickness or injury caused directly or indirectly by war or riot, or while participating in, or in consequence of having participated in, aeronautics; nor intentionally self-inflicted injury, while sane or insane.

Said health insurance shall continue only while the employee remains in the employ of the company.

Reasonable rules and regulations shall be promulgated by Chicago surface lines to make effective the intent and purpose of the insurance provisions of this award.

SEC. 4. During the first year in which the insurance hereby awarded is effective, the same shall be provided by policy or policies, written by reputable insurance company or companies; but at the expiration of said first year, Chicago surface lines shall have the right, if they so elect, to provide for the carrying out and performance by their own insurance department of the obligations and undertakings which will give to the employees the protection and benefits hereby awarded.

SEC. 5. In conformity with paragraph (b), section 1, of the arbitration agreement, dated July 18, 1927, which provides that cost of insurance benefits shall be considered as wages, this board of arbitration estimates the cost of health, accident, and life insurance at \$650,000 per annum, which is approximately 1½ cents per hour-wage rate per employee.

The Chicago Rapid Transit Co. signed an agreement December 14, 1927, with the members of Division 308, employees on the elevated lines, to accept this award also.

Men's Clothing Industry—Chicago

Discharge

ON THE complaint of the union that an offpresser had been suspended without proper cause, the impartial chairman in case No. 1110, October 14, 1927, expressed his views as follows:

It seems to the board that two major issues are involved: The worker feels that the pressing of the coat should be left to his own judgment, and he went out of his way to demonstrate to the examiner that the instructions of the foreman would result in poor pressing. The other issue is that of procedure when the firm wishes to change the method of work. If the method of doing the work is left to the individual judgment of those in the section, it is clear that the firm can not inaugurate changes successfully and that supervision of work in process is of little consequence. In making a change in method, a logical procedure is provided by the agreement, both for the management and for the workers. The board is of the opinion that the worker had nothing to lose by pressing the coats as directed, and that if he had complaint, he had opportunity to take the matter up with his shop chairman. His attitude toward both the foreman and the examiners is that of unwillingness to be told how to do his work. The board is unwilling to sanction his discharge, but feels that he is a disturbing factor in this shop. It is directed that he be placed in the offpressing section in the other shop operated by the firm, without pay for time lost.

Discipline of Foreman

ON THE request of the union that a foreman be disciplined for making remarks in a shop tending to undermine the union and its officials, the impartial chairman in case No. 1118, December 7, 1927, said:

From the testimony submitted in this and in other cases the board is convinced that the foreman is disposed to argue over trifles and to concern himself with

things which are primarily a concern of the workers. He is recognized as capable in his estimate of quality, but he lacks the ability to handle the people and he talks altogether too much. If he can not correct these faults he will create a situation which will make it exceedingly difficult for the union and the firm to cooperate. The evidence is not sufficient to warrant his discharge by the board, but it is extremely important that the firm recognize his faults and act accordingly.

Holiday Pay

IN CASE No. 1122, decided December 20, 1927, the impartial chairman ruled as follows regarding holiday pay to five temporary cutters laid off one day before Thanksgiving by a firm accustomed to give holiday pay to any of its help working any part of the pay-roll week in which a holiday occurs:

The practice as to holiday pay is not the same in all houses, but in those houses where the rule is to pay if the cutter works any part of the week in which a holiday occurs, no distinction is made between temporary cutters and permanent cutters. In one house an exception is made in the case of workers serving a probationary period of two weeks, but it would not appear that temporary cutters as such come within the provisions of the probationary period. The board agrees with the firm that the rule must be applied with discrimination and should not be carried to the point of absurdity. Except for this reservation, the board can see no reason for making a distinction between temporary men and permanent men. Moreover, other considerations, which the chairman explained at the hearing, make it desirable that temporary cutters have opportunities as nearly equal as possible to those of permanent cutters. The board rules that those cutters are entitled to pay for Thanksgiving.

Lost Time

ON THE request of the union that a firm be directed to pay workers for certain time unnecessarily lost, the impartial chairman in case No. 1119, December 7, 1927, refused, as follows:

The evidence presented indicates that on at least one occasion considerable time was lost which might have been avoided, but there is no evidence warranting the conclusion that the firm acted in bad faith, or that there was gross mismanagement. The board understands that since the case was heard steps have been taken to avoid a recurrence of the complaint. This appears to the board to be the main consideration. While it is true that the people lost time on one or more occasions, no work was diverted, and the board does not feel justified in ordering pay for time lost.

Men's Clothing Industry—New York City

FOUR cases, Nos. 413, 414, 417, and 421, relating to requests for cheaper contractors, were decided by the impartial chairman of the New York clothing industry, December 15 and 27, 1927, and January 11 and 16, 1928.

In the first of these the firm requested an additional knee-pants contractor to make an additional cheaper grade, stating that it had but one contractor for all grades of pants, who was "equipped to make the best grade but can not afford to make the cheapest grade at as low a price as can other contractors in the market."

The firm wanted a reduction of 5 cents, the contractor offered 3 cents, which the union said was the lowest price offered by any contractor.

The impartial chairman ruled as follows:

Since the firm's present contractor is willing to reduce his price in order to make the new cheap line, it is the opinion of the impartial chairman that this

contractor should be given the preference and permitted to make this additional line provided that he does so for a price not in excess of that generally prevailing in the market for such work.

The second was a request of a firm for a contractor to make a cheaper grade of vest than that made by the present contractor. The firm had changed the character of the clothing it manufactured and had obtained cheaper coat and pants contractors but the vest makers' union had refused to grant as cheap a vest contractor as the firm wished because it "felt that this firm was demanding too much." The impartial chairman decided as follows:

It is the opinion of the impartial chairman that in those cases where, because of market conditions, a firm has introduced new grades of merchandise and the union has made a sincere effort to meet the new conditions created by the change, the firm should cooperate with the union and not make unreasonable demands. In the present case the union has endeavored by a series of reductions to aid the firm. Repeated questions of union representatives and of the impartial chairman have failed to elicit from the firm any particulars as to what operations will be eliminated and what changes if any will be made to justify further lowering of the price. A study of comparative tables of prices paid for similar merchandise does not indicate that the firm is in this instance overpaying. Furthermore the firm has not given the present arrangement sufficient trial, since it is only six weeks since the last price was set. In view of these considerations the impartial chairman must at this time deny the request for a cheaper contractor.

The third was a request of a firm for a contractor to make a cheap line of pants. It had only one contractor, who was furnishing satisfactory service and was willing to make pants at a lower price but not low enough to satisfy the firm.

The impartial chairman ruled as follows:

Since according to [the pants contractors' association] the firm's present contractor is willing to reduce the price from 84 and 87 cents to 79 cents for all makes, the impartial chairman feels that he should be given the opportunity to do the work at the reduced rate, especially since the firm is satisfied with his work. The firm is therefore directed to send all its grades to [its present contractor].

The fourth was a request of a firm for a cheaper contractor to make a coat at less money. The impartial chairman ruled as follows:

Upon consideration the chairman is of the opinion that in view of the fact that the contractor has offered a reduction of 10 cents and has done everything necessary in his shop to insure satisfaction to the firm, the firm should continue to send him work as in the past.

**Railroads—Station Service Board of Adjustment, Operating Department,
N. Y., N. H. & H. R. R.**

FROM September 22 to November 10, 1927, the company had an assistant yard delivery clerk in its Hell Gate yard working daily from 7 to 11 a. m. and 3 to 11 p. m. part of the time, and from 6 to 11 a. m. and 4 to 7 p. m. the rest of the time. Two other clerks were assigned to duty with him, who reported at 7 a. m. and worked 10 or more hours a day as needed, receiving pay at overtime rates. It was alleged that the carrier had violated rule 46 of the agreement in not paying the first-named clerk for his lay-off period. The station service board of adjustment, operating department, New York, New Haven & Hartford Railroad in Docket 70, January 18, 1928, decided as follows:

The board considers that the character of the work attached to the position and the circumstances connected with it, which required continuous service and employment of other clerks during the lay-off period, that with special reference to rule 46 and interpretation 3 of decision 630 of the United States Railroad Labor Board, that the establishment of this intermittent service assignment was not permissible under the rule. The board, therefore, decides that Mr. C. shall be paid continuously from reporting time until finally relieved less one hour for meals in the period from the week ending September 22, 1927, to November 10, 1927, inclusive.

Railroads—Train-Service Board of Adjustment for the Western Region

Guarantee Rule

ARTICLE 3 (b) of the trainmen's schedule on the Atchison, Topeka & Santa Fe Railway coast lines guaranteed the trainmen pay for calendar working-days of the month. Sunday is not considered in the guaranty unless one of the calendar days is used as the lay-over day instead of Sunday, then the equivalent of the calendar days is guaranteed. A crew assigned to work every day in the month made local freight trips on 23 calendar days and 4 Sundays of a certain month and was paid for 27 days. The men laid claim to mileage on the 3 days of the month not worked. The carrier said that having worked 27 days, the guaranty had been fulfilled. The board, however, sustained the claim in decision No. 2523, October 28, 1927.

Seniority

TWO similar cases were decided by the board on October 18, 1927, in decisions Nos. 2510 and 2511. The facts in the first were as follows: A demoted engineer holding seniority on the Walla Walla seniority district was holding a regular assignment as fireman on a passenger run out of Spokane, in another seniority district. The carrier found it necessary to increase the engineer list at Walla Walla, and the demoted engineer deadheaded from Spokane to Walla Walla to resume service as an engineer.

Contending that the deadheading was at the instance of the company and on company business, he claimed pay for the deadhead trip under section 8 of article 40 and section 1 (b) of article 33 of the agreement, reading as follows:

SECTION 1. (a) Enginemen deadheading on company business on passenger trains will be paid for actual miles at 6.16 cents per mile for engineers and 4.56 cents per mile for firemen and helpers, and for deadheading on freight trains 6.84 cents per mile for engineers, 5 cents for firemen and helpers, *Provided*, That minimum day at above rates will be paid for deadhead trip if not combined with service as provided in section 2 or no other service is performed within 24 hours from time called to deadhead.

NOTE.—Above rates are to be increased or decreased at the same time and to correspond with wage rate increases or decreases.

(b) Deadheading caused by exercise of seniority will not be paid for.

SEC. 8. Firemen having successfully passed qualifying examinations shall be eligible as engineers. Promotion and the establishment of a date of seniority as engineer, as provided herein, shall date from the first service as engineer, when called for such service, provided there are no demoted engineers back firing. No demoted engineer will be permitted to hold a run as fireman on any seniority district while a junior engineer is working on the engineers' extra list or holding a regular assignment as engineer on such seniority district.

The carrier, however, opposed the claim on the ground that the engineer deadheaded "of his own volition and without instruction from the company to do so, being merely notified that there was work for him as engineer in accordance with his seniority on the Walla Walla extra board; therefore, he was not deadheading on company business, but instead was deadheading in the exercise of his seniority as an engineer" and therefore was not entitled to pay for the deadhead trip.

In the second case three demoted engineers working as firemen on runs with terminal at other than the point where extra board for engineers was maintained were needed for service as engineers on extra boards at Walla Walla and Tekoa. They deadheaded from the terminal of their assigned runs as firemen to the point where the engineers' extra board was maintained, and claimed pay for deadheading, on the ground that the deadheading was on company business.

In both cases the board delivered the same opinion:

Decision.—The board decides that the claim for pay for deadheading to increase extra lists as a result of increase in business is sustained, and claim for pay for deadheading to increase or decrease extra lists as a result of complying with the mileage provisions of schedule article 41 is denied.

IMMIGRATION AND EMIGRATION

Statistics of Immigration and Emigration for December, 1927

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

IN DECEMBER, 1927, a total of 32,802 aliens (22,350 immigrant and 10,452 nonimmigrant) were admitted and 30,503 (9,085 emigrant and 21,418 nonemigrant) departed, resulting in a net increase in the alien population of the United States of 2,299.

During the same month 18,922 American citizens arrived from and 25,209 departed for foreign lands. Aliens debarred this month from entering the United States numbered 1,679; the number deported under warrant proceedings was 999.

Aliens admitted during the six months—July to December last—reached a total of 271,139, a decrease from the corresponding period of the previous year when 288,245 aliens entered the country. New York continues to be the principal port of arrival for aliens from overseas. During the last half of the calendar year 1927, 157,340 aliens landed at that port, or over four-fifths of the number arriving at all seaports. In the same period 17,884 aliens were admitted at the Atlantic seaports other than New York; 3,265 at Gulf of Mexico ports; 8,983 at Pacific ports; and 3,442 at ports in Alaska, Hawaii, and Porto Rico. At points along the Canadian and Mexican borders 80,225 aliens were admitted during the same six months.

New York was also the principal port of departure for both the aliens and citizens leaving the country during the half-year ended December 31, 1927. During this period 151,671 aliens and 220,690 citizens departed, and of this number 97,711 aliens and 164,620 citizens embarked at the port of New York.

Of the 164,665 immigrant aliens admitted during the six months ended December 31, 1927, European countries, mainly Germany, the Irish Free State, Great Britain, Italy, and Poland, contributed 80,695; the Western Hemisphere, principally Canada and Mexico, 81,391; Asiatic countries, 1,979; and Africa, Australia, and the Pacific Islands, 600.

Over two-thirds of the emigrant aliens leaving during the same six months to make their homes abroad again left for Europe, 33,434 being recorded as giving countries on that continent as their intended future permanent residence. In the same period 3,810 emigrants left for Asia, 6,981 for the Americas, and 310 for other countries.

TABLE 1.—INWARD AND OUTWARD PASSENGER MOVEMENT DURING JULY, AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1927

Period	Inward					Aliens de- barred from enter- ing ¹	Outward					Aliens de- ported after land- ing ²
	Aliens admitted			United States citi- zens ar- rived	Total		Aliens departed			United States citi- zens de- parted	Total	
	Immi- grant	Non- immi- grant	Total				Emi- grant ³	Non- emi- grant ²	Total ²			
1927												
July.....	23,420	15,973	39,393	29,935	69,328	2,002	9,230	18,509	27,739	65,686	93,425	709
August.....	28,418	19,011	47,429	57,701	105,130	1,574	6,322	17,014	23,336	43,039	66,375	1,346
September.....	31,000	25,619	56,619	75,557	132,176	1,600	7,625	16,885	24,510	39,748	64,258	901
October.....	31,719	21,578	53,297	50,254	103,551	1,567	6,402	16,424	22,826	24,396	47,222	932
November.....	27,758	13,841	41,599	24,325	65,924	1,723	5,871	16,886	22,757	22,612	45,369	1,030
December.....	22,350	10,452	32,802	18,922	51,724	1,679	9,085	21,418	30,503	25,209	55,712	999
Total....	164,665	106,474	271,139	256,694	527,833	10,145	44,535	107,136	151,671	220,690	372,361	5,998

¹ Not included among inward numbers, as they were not permitted to enter the United States.² Deported aliens are included among the emigrant or the nonemigrant aliens.

TABLE 2.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED AND INTENDED FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED, DURING THE FISCAL YEAR ENDED JUNE 30, 1927, DURING THE SIX MONTHS ENDED DECEMBER 31, 1927, AND DURING THE MONTH OF DECEMBER, 1927, BY COUNTRY

[Residence for a year or more is regarded as permanent residence]

Country	Immigrant			Emigrant		
	Fiscal year 1927	July to December, 1927	December, 1927	Fiscal year 1927	July to December, 1927	December, 1927
Albania.....	243	170	21	237	48	4
Austria.....	1,016	702	134	468	327	73
Belgium.....	764	374	65	482	296	22
Bulgaria.....	222	114	16	130	75	11
Czechoslovakia.....	3,540	1,983	333	2,276	1,059	177
Danzig, Free City of.....	223	191	18	6	1	—
Denmark.....	2,505	1,101	79	536	304	69
Estonia.....	139	117	7	14	5	1
Finland.....	438	247	29	536	324	64
France, including Corsica.....	4,405	2,374	376	1,637	1,181	131
Germany.....	48,513	22,242	3,948	4,748	3,226	659
Great Britain and Northern Ireland:						
England.....	9,990	4,020	536	4,994	3,411	519
Northern Ireland.....	491	87	6	165	2	1
Scotland.....	12,611	5,739	864	1,441	948	131
Wales.....	1,068	882	121	44	26	7
Greece.....	2,089	1,291	146	3,130	1,387	172
Hungary.....	813	492	82	841	465	62
Irish Free State.....	28,054	12,487	1,279	1,049	755	127
Italy, including Sicily and Sardinia.....	17,297	9,178	1,787	17,759	11,303	3,239
Latvia.....	403	129	10	21	22	7
Lithuania.....	770	278	50	314	179	12
Luxemburg.....	111	53	5	13	8	2
Netherlands.....	1,733	854	87	456	248	39
Norway.....	6,068	2,643	277	1,786	999	341
Poland.....	9,211	4,954	1,007	2,650	1,925	192
Portugal, including Azores, Cape Verde, and Madeira Islands.....	567	328	13	2,347	632	118
Rumania.....	1,270	727	148	1,248	578	103
Russia.....	1,183	704	111	239	202	23
Spain, including Canary and Balearic Islands.....	429	257	53	2,178	1,246	386
Sweden.....	8,287	3,754	643	1,115	646	172
Switzerland.....	2,121	1,072	118	594	377	53
Turkey in Europe.....	216	191	21	24	26	—
Yugoslavia.....	1,190	756	126	1,911	1,176	196
Other Europe.....	388	204	32	13	27	1
Total, Europe.....	168,368	80,695	12,548	55,402	33,434	7,097

TABLE 2.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED AND INTENDED FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED, DURING THE FISCAL YEAR ENDED JUNE 30, 1927, DURING THE SIX MONTHS ENDED DECEMBER 31, 1927, AND DURING THE MONTH OF DECEMBER, 1927, BY COUNTRY—Continued

Country	Immigrant			Emigrant		
	Fiscal year 1927	July to December, 1927	December, 1927	Fiscal year 1927	July to December, 1927	December, 1927
Armenia.....	13	14	2	20	11	1
China.....	1,471	823	83	4,179	2,812	478
India.....	102	60	7	126	113	14
Japan.....	723	304	39	1,205	615	86
Palestine.....	464	276	43	142	40	1
Persia.....	32	33	—	33	15	3
Syria.....	590	289	47	185	123	9
Turkey in Asia.....	60	35	5	74	43	3
Other Asia.....	213	145	17	43	38	6
Total, Asia.....	3,669	1,979	243	6,007	3,810	601
Canada.....	81,506	44,659	5,110	1,953	1,321	98
Newfoundland.....	3,074	1,320	160	487	390	66
Mexico.....	67,721	29,760	3,709	2,957	1,813	262
Cuba.....	3,020	1,794	136	1,598	1,096	329
Other West Indies.....	999	619	49	2,134	1,126	406
British Honduras.....	108	26	1	20	10	—
Other Central America.....	1,663	1,026	74	701	401	71
Brazil.....	1,089	568	90	209	47	6
Other South America.....	2,688	1,611	162	1,244	777	102
Other America.....	4	8	2	—	—	—
Total, America.....	161,872	81,391	9,493	11,303	6,981	1,340
Egypt.....	228	132	18	28	9	2
Other Africa.....	292	142	14	84	76	7
Australia.....	464	203	20	379	169	32
New Zealand.....	248	100	12	129	49	6
Other Pacific Islands.....	34	23	2	34	7	—
Total, others.....	1,266	600	66	654	310	47
Grand total, all countries.....	335,175	164,665	22,350	73,366	44,535	9,085

TABLE 3.—IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED DURING THE FISCAL YEAR ENDED JUNE 30, 1927, DURING THE SIX MONTHS ENDED DECEMBER 31, 1927, AND DURING THE MONTH OF DECEMBER, 1927, BY RACE OR PEOPLE, SEX, AND AGE PERIODS

Race or people	Immigrant			Emigrant		
	Fiscal year 1927	July to December, 1927	December, 1927	Fiscal year 1927	July to December, 1927	December, 1927
African (black).....	955	516	58	870	373	119
Armenian.....	983	638	88	51	26	4
Bohemian and Moravian (Czech).....	2,406	722	97	1,724	639	130
Bulgarian, Serbian, and Montenegrin.....	600	332	44	1,592	855	122
Chinese.....	1,051	573	59	4,117	2,771	470
Croatian and Slovenian.....	821	489	95	251	344	59
Cuban.....	1,919	1,253	68	980	759	249
Dalmatian, Bosnian, and Herzegovinian.....	69	57	5	380	124	34
Dutch and Flemish.....	3,125	1,509	166	1,005	581	65
East Indian.....	51	24	2	83	77	15
English.....	40,165	20,224	2,397	7,449	5,039	776
Finnish.....	629	341	38	577	358	68
French.....	19,313	11,111	1,116	1,761	1,090	126
German.....	56,587	26,761	4,597	5,515	4,023	773
Greek.....	2,557	1,573	178	3,140	1,433	181
Hebrew.....	11,483	6,215	894	224	149	15
Irish.....	44,726	20,424	2,248	1,432	943	150
Italian (north).....	2,637	1,405	267	2,209	971	121
Italian (south).....	15,892	8,391	1,591	15,627	10,409	3,134
Japanese.....	660	291	39	1,148	589	83

TABLE 3.—IMMIGRANT ALIENS ADMITTED AND EMIGRANT ALIENS DEPARTED DURING THE FISCAL YEAR ENDED JUNE 30, 1927, DURING THE SIX MONTHS ENDED DECEMBER 31, 1927, AND DURING THE MONTH OF DECEMBER, 1927, BY RACE OR PEOPLE, SEX, AND AGE PERIODS—Continued

Race or people	Immigrant			Emigrant		
	Fiscal year 1927	July to December, 1927	December, 1927	Fiscal year 1927	July to December, 1927	December, 1927
Korean	47	12	1	52	22	6
Lithuanian	549	196	29	331	197	14
Magyar	1,049	584	83	946	520	68
Mexican	66,766	29,107	3,607	2,774	1,743	237
Pacific Islander	8			7	2	
Polish	4,249	2,553	685	2,725	1,893	190
Portuguese	843	427	31	2,363	665	122
Rumanian	422	233	45	1,201	508	101
Russian	1,249	677	91	510	328	36
Ruthenian (Russniak)	445	196	41	19	40	5
Scandinavian (Norwegians, Danes, and Swedes)	19,235	8,865	1,247	3,678	2,084	605
Scotch	25,544	13,130	1,717	1,930	1,342	133
Slovak	1,017	1,261	245	693	420	71
Spanish	1,065	652	64	2,781	1,611	439
Spanish American	3,185	1,912	169	1,792	893	118
Syrian	684	364	48	203	126	8
Turkish	112	105	12	166	84	4
Welsh	1,300	986	136	65	52	6
West Indian (except Cuban)	381	264	14	754	349	177
Other peoples	396	283	38	241	103	11
Total	335,175	164,665	22,350	73,366	44,535	9,085
Male	194,163	86,555	11,549	51,536	32,074	7,368
Female	141,012	78,110	10,801	21,830	12,461	1,717
Under 16 years	51,689	28,002	4,108	2,986	1,897	230
16 to 44 years	254,574	121,260	15,994	54,217	31,760	6,929
45 years and over	28,912	15,403	2,248	16,163	10,878	1,925

TABLE 4.—ALIENS ADMITTED DURING DECEMBER, 1927, AND FROM JULY 1 TO DECEMBER 31, 1927, SHOWING PRINCIPAL CLASSES UNDER THE IMMIGRATION ACT OF 1924, BY PRINCIPAL PLACES OF BIRTH, AS SPECIFIED

Place of birth	Aliens admitted					
	Quota immigrant		Nonimmigrant and nonquota immigrant		Total during December, 1927	Grand total July 1 to December 31, 1927
	December, 1927	July to December, 1927	December, 1927	July to December, 1927		
Europe	11,753	75,394	9,401	91,536	21,154	166,930
Asia	93	738	1,366	10,322	1,459	11,060
Africa	22	196	39	403	61	599
Australia and Pacific Islands	19	172	300	2,748	319	2,920
Canada, Mexico, and other America	46	352	9,763	89,278	9,809	89,630
Total	11,933	76,852	20,869	194,287	32,802	271,139

TABLE 5.—ALIENS ADMITTED DURING DECEMBER, 1927, AND FROM JULY 1 TO DECEMBER 31, 1927, BY CLASSES UNDER THE IMMIGRATION ACT OF 1924

[The number of immigrants appearing in this table and in Table 4 is not comparable with the number of statistical immigrant aliens shown in the other tables, by ports of entry, race, or people, etc.]

Class	December, 1927	July to December, 1927
<i>Nonimmigrants</i>		
Government officials, their families, attendants, servants, and employees.....	314	3,424
Temporary visitors for business or pleasure.....	3,556	32,940
In continuous passage through the United States.....	1,995	13,299
To carry on trade under existing treaty.....	125	758
Total.....	5,990	50,421
<i>Nonquota immigrants</i>		
Wives and children of United States citizens.....	¹ 2,333	¹ 13,765
Returning residents.....	4,509	56,336
Natives of nonquota countries.....	² 7,773	¹ 70,927
Wives and children of natives of nonquota countries.....	¹ 52	¹ 455
Ministers of religious denominations and their wives and children.....	99	752
Professors of colleges, academies, seminaries, or universities, and their wives and children.....	7	144
Students.....	97	1,354
Spanish subjects admitted to Porto Rico.....	9	29
Veterans of the World War and their wives and children.....		104
Total.....	14,879	143,866
Quota immigrants (charged to quota).....	11,933	76,852
Grand total admitted.....	32,802	271,139

¹ Wives and unmarried children under 18 years of age, born in quota countries.² Does not include aliens born in nonquota countries, who were admitted under the act as Government officials, visitors, returning residents, etc.

Mexican Immigration into the United States from Nogales District, Sonora

REPORTS from Consul Henry C. A. Damm at Nogales, Sonora, Mexico, dated October 22, 1927 and January 25, 1928, reveal the fact that immigration from the Mexican west coast into the United States continues unabated, and that during the year 1927, 5,235 nonquota immigration visas were issued at the above office.

As to the occupation of the entrants, the day laborers (*jornaleros*) furnish by far the largest number; next in order are the servants and housekeepers who wish to engage in domestic service in near-by American towns.

California and Arizona are the chief destination points of Mexicans who immigrate from the west coast with the intention of working principally on farms, on ranches, and in fruit orchards, while some work as railroad section hands. The consul states that there is no movement into the industrial or factory centers of the United States, at least from this district.

As regards their intentions to remain in the United States most of them expect to remain longer than a year but not permanently. It is not expected, when the immigrants make application for visas, that they can definitely state the length of time they intend to remain, but the fact is revealed that most of them do not consider that they are permanently leaving their own country.

Higher wages and better living conditions are given as the principal reasons for the Mexicans entering the United States. The agricul-

tural work in which most of them engage is seasonal, however, and the resulting periods of unemployment cause hardships which give rise to the complaints of our Southwestern States that their free hospitals and charitable institutions are taxed to the limit with the Mexican immigrants. Greater freedom of movement is cited as another reason for the Mexican emigrating to the United States. A cheap second-hand automobile is usually purchased, upon which the family and a few household goods are loaded. The good roads permit them to drive from Arizona to California and up and down that State following the crops, helping with the early vegetables in the Imperial Valley during the winter months and later with the fruit crops as they mature.

Amendment of Immigration Law of Panama¹

ON JANUARY 28, 1927, the National Assembly of Panama passed a law (No. 16) amending a previous law (No. 13) enacted on October 23, 1926. The decree prohibits the immigration into Panama of Chinese, Japanese, Syrians, Turks, East Indians, Hindu-Arians, Dravidians, and Negroes of the Antilles and the Guianas, whose native language is not Spanish, irrespective of whether they were born or were naturalized in countries different from that of their origin, with the exception of the natives of the republics which constitute the Pan American Union.

The executive may authorize the immigration of natives of the Antilles if they can prove the following facts: (1) That there is not an adequate supply of laborers in the Republic who are qualified to carry out the work contemplated; (2) that such work is a public utility or of an agricultural nature; and (3) that the wages offered the immigrants are not lower than the established rates for the natives or foreign resident laborers. Furthermore they must guarantee that they will pay their own expenses for hospital care, if such is needed while they remain in Panama.

The Department of Foreign Relations is to require of all persons passing through the country who belong to the races whose immigration is forbidden, a bond of not less than 250 nor more than 500 balboas to guarantee their leaving the country. These immigrants may not remain in the territory of the Republic for over one month.

Aliens whose immigration is forbidden by this law but who reside in the border of the Republic and are engaged in agricultural pursuits on adjoining foreign territories, may cross the border to return to their domiciles without going through the passport formalities.

¹Panama. Secretaria de Relaciones Exteriores. Inmigracion y Pasaportes. Panama, 1927, pp. 55-58.

CURRENT NOTES OF INTEREST TO LABOR

Studies Undertaken by International Labor Office

THE following studies are to be made by the International Labor Office, according to the January 2, 1928, issue of *Industrial and Labor Information* (pp. 7, 8):

Labor contracts; fluctuation of wages in recent years; family allowances; utilization of workers' leisure; international statistics of cooperative societies; conditions of work of foreign workers; social charges (the cost of social services set up by labor legislation for 10 countries); compulsory sickness insurance in countries with scattered population; minimum wage legislation in agriculture; maritime questions, including the regulation of water line, regulation of deck cargoes other than wood, and uniform statistics of accidents on ships.

The office is also contemplating studies on the living and working conditions of artistic painters, theatrical artists, and unemployed intellectual workers. Another subject to be taken up is the standardization of industrial hygiene.

Industrial Transference Board of England

ON JANUARY 6, 1928, the British Minister of Labor announced that with the approval of the Prime Minister he had appointed an industrial transference board, for the purpose of facilitating the transfer of workers for whom opportunities for employment in their own district or occupation are no longer available. In particular, it is expected that the board will busy itself in behalf of the coal miners. Some action of this kind was urged by the members of the Royal Commission on the Coal Industry of 1925, who, in their report, pointing out that the industry was overmanned, and that any efficient reorganization would probably at once throw a number of workers hopelessly out of employment, recommended that "the Government should be ready to take all practicable measures for the assistance of any labor that may be displaced or for facilitating its transfer, and should provide such funds as might be required for such purposes."

The *London Times* of January 7 gives the following summary of the purposes and probable activities of the board:

The sole object of the board will be to stimulate and assist the transfer of workers from distressed areas to openings in other industries both at home and overseas. In order to perform this task, the board proposes to work closely with every department which can help, e. g., the overseas settlement committee, where questions of emigration arise; the Ministry of Health, where housing schemes need acceleration; the board of education, where education can be brought in to help; and the board of trade on general commercial questions.

According to the parliamentary correspondent of *The Times*, it is understood that the Government are prepared to give the board wide powers, if necessary, to supplement and develop the existing machinery for providing employment. They will keep in touch with both the employers and the managers of the employment exchanges, and it is probable that in areas where there is a prospect of finding a fair amount of employment, committees representing the local industries will be set up to help the board.

Aid to Tubercular Government Employees in Portugal ¹

THE Portuguese Government passed a law recently designed to aid Government employees suffering from tuberculosis. The law provides for the construction of hospitals, sanitariums, and establishments for the preventive treatment of the disease, in which these employees are to have free treatment. In addition they are to receive a monthly allowance of 500 escudos ² if single, and 1,000 escudos if married or with children.

¹ Portugal, *Diario de Noticias*, Lisbon, Oct. 31, 1927; and International Labor Office, *Industrial and Labor Information*, Geneva, Dec. 12, 1927, p. 347.

² Average exchange rate of escudo in 1927 = 5.03 cents.

ACTIVITIES OF STATE LABOR BUREAUS

AMONG the labor activities of the State bureaus, the following, reported either directly by the bureaus themselves or indirectly through the medium of their printed reports, are noted in this issue of the Labor Review:

California.—Report on changes in volume of employment and in weekly pay rolls in 781 industrial establishments, page 152.

Illinois.—Report on changes in employment and earnings in factories in that State, page 153.

Iowa.—Report on changes in volume of employment in industries in Iowa, page 155.

Maryland.—Report on changes in volume of employment and in weekly pay rolls in 183 establishments, page 156.

New York.—Decrease in amputations in industrial accidents, page 42; and changes in number of employees and in amount of weekly pay rolls in 1,600 factories, page 157.

Ohio.—Report of operations under the State workmen's compensation act, page 73.

Pennsylvania.—Accidents occurring in industries of the State in 1927, page 42; and report on changes in weekly man-hours and in weekly pay-roll totals in various industries, page 159.

Wisconsin.—Report of operations under the State workmen's compensation act, page 74; and report on changes in number of employees and in amount of weekly pay rolls, page 161.

PUBLICATIONS RELATING TO LABOR

Official—United States

OHIO.—Department of Industrial Relations. *Fifth annual report, including the annual report of the Industrial Commission of Ohio, for the fiscal year July 1, 1925, to June 30, 1926.* Columbus, 1927. 45 pp.

Data on workmen's compensation, taken from this report, are given on page 73 of this issue.

— Industrial Commission. *Ohio Industrial Commission Monitor, Vol. 1, No. 1, January, 1928.* Columbus.

With this issue the Ohio Industrial Commission inaugurates a monthly bulletin which will carry authoritative information on the current work of the commission and its division of industrial safety and hygiene, sections being devoted to the current decisions and rulings of the commission; contemplated and effected changes in the workmen's compensation law; the industrial accident situation in its various aspects; occupational diseases; and code work, safety conferences, and similar subjects. Special articles will be carried from time to time on such topics as the prevention of industrial accidents and occupational diseases in industry generally, as well as on the problems peculiar to particular industries; first aid; foreman training; proper illumination; and rehabilitation of cripples.

PENNSYLVANIA.—Department of Labor and Industry. *Special bulletin No. 16: Spray painting in Pennsylvania.* Harrisburg, 1926. 202 pp.; illustrations, diagrams.

A brief summary of the findings of this study was given in the September, 1927, issue of the Labor Review (p. 59).

UNITED STATES.—Civil Service Commission. *Forty-fourth annual report, for the fiscal year ended June 30, 1927.* Washington, 1927. 115 pp.

On June 30, 1927, there were 559,138 employees in the entire executive civil service, a decrease of 1,567 from the number employed in 1926. The postal service had 55.22 per cent of the total number in 1927.

— Department of Commerce. Bureau of Foreign and Domestic Commerce. *Commerce yearbook, 1926. Vol. II—Foreign countries and noncontiguous territories of United States.* Washington, 1927. 642 pp.; maps, charts.

This second part of the commerce yearbook for 1926 covers 61 foreign countries and Alaska, Hawaii, the Philippines, and Porto Rico. The volume contains a review of the economic conditions and events in each country or possession for the year 1926, and statistical data for 1926 or the latest available year, usually in comparison with preceding years. Information on labor conditions is included.

— Bureau of Mines. *Coal in 1925, by F. G. Tryon and L. Mann.* Washington, 1928. (From *Mineral Resources of the United States, 1925, Part II*, pp. 393-533.)

In addition to other detailed data on the coal-mining industry, the report contains tables showing number of men employed, days the mines were in operation, length of the working-day, output per man and average number of days worked per year, and strikes, suspensions, and lockouts, in 1925 and previous years.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Technical paper 419: Safe practices at oil derricks*, by H. C. Miller. Washington, 1927. 69 pp.; illustrations, diagrams.

Covers traveling equipment in the derrick; pipe tools; drilling and pumping and pulling wells; use of mud fluid and cement; belts and wire lines; eye accidents in the derrick; defective hand tools; personal cleanliness; boilers; and fire hazards and prevention.

— Department of Labor. Women's Bureau. *Bulletin No. 63: State laws affecting working women*. Washington, 1927. 51 pp.; charts.

Reviewed on page 40 of this issue.

— Federal Board for Vocational Education. *Eleventh annual report, 1927*. Washington, 1927. 73 pp.; charts.

Reviewed on page 109 of this issue.

— Navy Department. *Schedule of wages for civil employees under the Naval Establishment for the calendar year 1928*. Washington, 1928. 48 pp.

Wage rates for the clothing workers' service and the laborer, helper, and mechanical service are published on page 131 of this issue.

Official—Foreign Countries

AUSTRALIA.—Bureau of Census and Statistics. Tasmania Branch. *Statistics of the State of Tasmania for the year 1925-26*. [Hobart?], 1927. [Various paging.]

The section on manufacturing production includes statistics on number of workers and salaries and wages paid.

— (WESTERN AUSTRALIA).—Legislative Assembly. *The timber industry. Speech by May Holman on the timber industry regulation bill, delivered in the Legislative Assembly, Perth, October 19, 1926*. Perth, 1926. 20 pp.

In support of the timber industry act of 1926. Contains sections on machinery precautions, safety code for woodworking plants, safeguards, industrial safety, and aid for the injured. There is also a brief statement of accidents in the timber industry for the years 1919 to 1925.

— — *The timber industry regulation act, 1926*. Perth, 1927. 23 pp.

Contains a copy of the act together with regulations issued pursuant thereto.

BULGARIA.—Direction Générale de la Statistique. *Annuaire statistique du Royaume de Bulgarie, 1926*. Sofia, 1927. 584 pp. (Printed in Bulgarian and French.)

A compilation of statistics for the year 1926 from official publications of the bureau of statistics and other public offices and their archives, giving complete information on social, economic, and cultural life in Bulgaria.

CANADA.—Department of Labor. *Prices in Canada and other countries, 1927*. Ottawa, 1928. 32 pp.; chart. (Supplement to Labor Gazette, January, 1928.)

— — *Wages and hours of labor report No. 11: Wages and hours of labor in Canada, 1920 to 1927*. Ottawa, 1928. 100 pp. (Supplement to The Labor Gazette, January, 1928.)

Index numbers of rates of wages for various classes of labor in Canada, 1901 to 1927, taken from this report, are given on page 135 of this issue.

CZECHOSLOVAKIA.—[Ministry of Social Welfare.] *Statistique des assurances contre la maladie pendant l'année 1923*. Prague, 1926. 87 pp.; 14 tables. (Printed in Bohemian with French and German explanations.)

Statistics on sickness insurance for the year 1923, showing number of members, number of cases of sickness, finances, etc., for each district.

— — *Statistique des assurances contre les accidents pendant l'année 1923*. Prague, 1926. 186 pp. (Printed in Bohemian with French and German explanations.)

Statistics on accident insurance for the year 1923, including tables showing number and classes of accidents, finances, etc.

FINLAND.—[Socialministeriet. Försäkringsbyrån.] *Understödkassor, år 1925. Helsingfors, 1927. 91 pp. (Finlands officiella statistik XXVI, arbetsstatistik B, 22.)*

Report by the insurance bureau of the Finnish Ministry of Social Affairs on operations of workers' relief funds in 1925. There is a résumé in French.

GERMANY.—Reichsarbeitsministerium. *Sonderfragen des Arbeiterschutzes und Beobachtungen aus Unfallverhütung und Gewerbehygiene im Jahre 1926. Berlin, 1927. 122 pp.*

Treats of the protection of workers, prevention of accidents, and industrial hygiene, based upon the reports of Government officials for the year 1926.

— Reichsarbeitsverwaltung. *Arbeitsrecht, Arbeitsmarkt und Arbeiterschutz. Berlin, 1927. 243 pp.; charts. (38. Sonderheft zum Reichsarbeitsblatt.)*

Selected lectures by officials of the German Ministry of Labor and other departments and by professors of universities, dealing with various economic questions and with the law affecting labor in Germany.

GREAT BRITAIN.—Industrial Fatigue Research Board. *Report No. 48: Artificial humidification in the cotton weaving industry—its effect upon the sickness rates of weaving operatives, by A. Bradford Hill. London, 1927. 77 pp.; charts.*

Reviewed on page 47 of this issue.

— Medical Research Council. *Special report series, No. 113: Spirochetal jaundice, by G. Buchanan, M. D. London, 1927. 64 pp.; illustrations.*

A digest of this report is given on page 54 of this issue.

— Ministry of Labor. *Memorandum on certain points concerning the statistics of unemployment and of poor law relief. London, 1927. 7 pp. (Cmd. 2984.)*

— Registry of Friendly Societies. *Report for the year 1926. Part 4: Trade-unions. London, 1927. 41 pp.*

The report gives figures for the year ending December 31, 1925, showing that during the year there was a loss of about 10,000 in the membership of the unions of employees. The average yearly contribution from members was 35s. 10d. which was spent as follows: "17s. 8d. per member was spent on unemployment, dispute, sick, accident, and other benefits, 14s. 1d. on management and organization, 1s. as contributions to federations, other unions, etc., 6d. on political objects, and 2s. 7d. were added to the funds."

The registered unions of employers and traders showed a membership of 44,359. In the employers' unions, the average contribution per member was £2 11s. 1d. "Of this, and a further 2d. derived from other sources, 43s. 9d. was spent on management and organization, 7s. 1d. on sick, funeral, and other benefits, and 5d. as contributions to federations, other unions, etc."

INDIA.—Chief Inspector of Mines. *Annual report for the year ending December 31, 1926. Calcutta, 1927. 176 pp.; maps, charts.*

Information on employment in mines, taken from this report, is published on page 162 of this issue.

NETHERLANDS EAST-INDIES.—Departement van Landbouw, Nijverheid en Handel. Centraal Kantoor voor de Statistiek. *Statistisch jaaroverzicht van Nederlandsch-Indië, 1926. Weltevreden, 1927. 407 pp. (Printed in Dutch and English.)*

This statistical abstract for the Netherlands East-Indies contains data on population in general and on its intellectual, social, and economic status; sanitary conditions; recruiting of labor; trade-unions; mining, agricultural, and factory production; prices; and wages of workers in various industries.

RHODESIA (SOUTHERN RHODESIA).—Chief Native Commissioner. *Report for the year 1926. Salisbury, 1927. 20 pp.*

A considerable portion of the report is concerned with the native labor for European settlers, its quality and the best methods of securing a stable supply. Emphasis is laid on the need for Government inspection and control of working conditions on some of the farms and in some centers of the metal industries. "While the rates of wages may be left to be governed by economic laws, it is of the first importance that employers should submit to Government control and inspection of housing and feeding arrangements."

— Director of Census. *Report of census taken May 4, 1926. Salisbury, 1927. 2 cols. [Various paging.]*

Part II contains a section on occupations and industries.

STRAITS SETTLEMENTS.—Labor Department. *Annual report for the year 1926. Singapore, 1927. 27 pp.*

Contains data on immigration and emigration; recruiting of labor; assistance to the unemployed; welfare of laborers; wages; fatal accidents, by cause; and number of Indians, Chinese, Javanese, and others employed by the Government and at various specified estates and other places of employment in 1926.

SWEDEN.—[Social Departementet.] Socialstyrelsen. *Arbetartillgång, arbetstid och arbetslön inom Sveriges jordbruk år 1926. Stockholm, 1927. 58 pp. (Has résumé in French.)*

A summary of this report on unemployment, wages, and hours in Swedish agriculture is given on page 33 of this issue.

UNION OF SOUTH AFRICA.—Office of Census and Statistics. *Statistics of production: Statistics of factories and productive industries (excluding mining and quarrying) in the Union for the year 1924-25 (tenth industrial census, 1926). Pretoria, 1927. liii, 103 pp.*

Includes data on number of establishments in the different industries; number of employees, classified by industry, by race, and by grade of employment; number of Europeans under 18 years of age employed; and wages.

Unofficial

AMERICAN FEDERATION OF LABOR. Ohio branch. *Proceedings of the 44th annual convention, held at Middletown, Ohio, July 18-22, 1927. Columbus [1927?]. 173 pp.*

Among the matters taken up in resolutions were: Adequate appropriations for the administration of workmen's compensation, organization of the automobile industry, and workers' education.

— Wisconsin branch. *Wisconsin labor, 1927 (annual publication). Milwaukee, 290 Third Street, 1927. 99 pp.*

Includes a number of special articles by labor experts. Among these contributions are: "The part time school," by the director of the Wisconsin State Board of Vocational Education, and "Factors in wage determination," by the arbitration counsel of the International Typographical Union.

AMERICAN MANAGEMENT ASSOCIATION. *Annual convention series No. 70: Creating and maintaining morale. New York, 20 Vesey Street, 1928. 28 pp.*

The pamphlet brings together three papers presented at the American Management Association convention held in Chicago, November 1-4, 1927: "Creating and maintaining morale among manual workers," by Arthur T. Morey, general manager of Commonwealth Steel Co.; "Creating and maintaining morale among sales forces," by C. K. Woodbridge, president of the Electric Refrigeration Corp.; and "Creating and maintaining office morale," by Henry W. Cook, vice president and medical director, Northwestern National Life Insurance Co.

AMERICAN MANAGEMENT ASSOCIATION. *Special paper No. 18: Education in labor problems and training in labor administration in engineering colleges.* New York, 20 Vesey Street, 1928. 7 pp.

AMERICAN RANK AND FILE LABOR DELEGATION TO SOVIET RUSSIA, THE FIRST. *Report.* New York, International Publishers, 1928. 48 pp.

AUSTRALIAN LABOR PARTY. Western Australian Division. [Report of the special committee on child endowment to the] special conference of unions to consider child endowment, to be held at Perth, July 27, 1927. Perth, 1927. 15 pp.

Reviewed on page 107 of this issue.

BAYLE, F. *Les hauts salaires.* Paris, Félix Alcan, 1927. 624 pp.

A theoretical discussion of wages, taking into consideration the theory of modern wages, origin and justification of profit, and the 8-hour day.

BOTTAI, GIUSEPPE. *La carta del lavoro.* Rome, Edizioni del "Diritto del Lavoro," 1927. 208 pp.

A study of the Italian "Charter of Labor" from legal documents and other sources of information.

CANADIAN RAILWAY BOARD OF ADJUSTMENT No. 1. *Third report of proceedings, covering period October 1, 1923, to September 30, 1927.* [Montreal?] 1927. 20 pp.

During the period covered by the report the board handled 132 cases and its expenses amounted to \$31,384.

CHAMBER OF COMMERCE OF THE UNITED STATES. Department of Manufacture. *Growth of foremanship courses in the United States, June, 1926, to June, 1927.* Washington [1927?]. 16 pp., mimeographed.

Reviewed on page 112 of this issue.

CHINA FOUNDATION FOR THE PROMOTION OF EDUCATION AND CULTURE. Social Research Department. *First annual report, 1926-27.* Peking, 22 Nang Chang Chieh, 1927. 8 pp.

Gives a brief account of the progress of the department's studies of handicraft and factory workers, family budgets, and marketing of farm products.

CRAWLEY, S. L. *An experimental investigation of recovery from work.* New York, 1926. 66 pp; charts. (Archives of Psychology, No. 85.)

This study of the effects of muscular exertion in the production of fatigue was made on four subjects. Special attention was given to the length of the rest periods required for complete recovery of local muscular activity.

DAIELL, H. L. *First-aid and medical services in industry.* New Brunswick, N. J., Johnson and Johnson, 1928. 136 pp.; illustrations.

This study covers the medical service provided by about 70 companies. There is a brief summary of the points brought out in the study and the work of the individual establishments is described in more or less detail.

DESPLANQUES, CHARLES. *Barbiers, perruquiers, coiffeurs.* Paris, Gaston Doin et Cie., 1927. 278 pp.

A history of the occupations of hair cutting and hair dressing and an account of the relations of employers and employees, covering wages, hours, etc., trade-union organization, and employment methods.

DEUTSCHE GESELLSCHAFT FÜR GEWERBEHYGIENE. *Beihefte zum Zentralblatt für Gewerbehygiene und Unfallverhütung, 5-6: Temperatur, Feuchtigkeit und Luftbewegung in industriellen Anlagen, ihre Bedeutung für die Gesundheit der Arbeiter und die Verhütung ihrer schädigenden Einflüsse.* Frankfurt a. M. Viktoria-Allee 9 [1926?]. 182 pp.

Treats of temperature, moisture, and air currents in industrial plants—their significance with respect to health of workers and the avoidance of their hazards.

DUBLIN, LOUIS I., AND VAN BUREN, GEORGE H. *Special aspects of the declining tuberculosis death rate in the United States.* London, John Bale, Sons and Danielsson (Ltd.), 1927. 10 pp.; charts. (Reprinted from "Tubercle," October, 1927.)

A digest of this article is given on page 48 of this issue.

FELDMAN, HERMAN. *Prohibition, its economic and industrial aspects.* New York, D. Appleton & Co., 1927. 415 pp.

A study of the effects of prohibition upon the consumption and production of commodities, with chapters on the relation of prohibition to industrial accidents and the efficiency of the worker.

GASCÓN Y MIRAMÓN, ANTONIO. *Hacia una ley de cooperativas.* [Madrid?], Servicio de Publicaciones Agrícolas. [No date.] 106 pp.

Contains the text of the law governing cooperative societies, with a history of events leading to its enactment.

HORACE PLUNKETT FOUNDATION. *A survey of cooperative legislation.* London, George Routledge & Sons (Ltd.), 1927. 129 pp. (Reprint from Yearbook of Agricultural Cooperation in the British Empire (1928).)

Contains, for each country, a short summary of the legislation on cooperative marketing.

INTERNATIONAL METAL WORKERS' FEDERATION. *Minutes of the XIth International Metal Workers' Congress of August 8, 9, and 10, 1927, at Paris.* Berne (Switzerland), 1927. 113 pp.

Among the subjects discussed at this congress were: Hours of labor, cartels, rationalization, and the attitude of the American metal workers toward affiliation with the Metal Workers' International.

LAHY, J. M. *La sélection psychophysiologique des travailleurs: Conductors de tramways et d'autobus.* Paris, Dunod, 1927. 240 pp.; illustrations, diagrams.

A study of the psychophysiological selection of workers with special relation to drivers of street cars and motor busses. It includes an account of the different tests given to drivers to determine their fitness for these positions.

LECLERC DE PULLIGNY ET BOULIN. *Hygiène industrielle générale.* Vol. 7. Paris, J. B. Baillière et Fils. [No date.] 452 pp.; illustrations, diagrams.

This treatise on industrial hygiene deals with sanitation of workshops, gases and fumes, ventilation, lighting, dust removal, personal hygiene of workers, fatigue, medical inspection, and compensation for industrial diseases. Considerable space is given to the legislation of France and other countries on various phases of the subject.

MACMILLAN, W. C. *The Cape color question.* London, Faber & Gwyer, 1927. 304 pp.; maps.

A historical review of the relations between Europeans and native races in what is now the Union of South Africa, drawing largely for material on hitherto unused papers. The purpose of the study is given in the statement that "this African and world race problem, ever increasingly urgent in our day, is to be regarded as the culmination of centuries of development, and is not to be solved in a flash by passing acts of parliament, least of all by wild planning for the future, with an imperfect or erroneous understanding of the past."

MOLL-WEISS, AUGUSTA. *Les gens de maison.* Paris, Gaston Doin et Cie, 1927. 288 pp.

In this work the author reviews the various conditions of house service from slavery up to modern times. An account of present methods of employment, wages, working conditions, etc., is given, and there is a discussion of the reforms needed in order to attract workers to this form of employment.

MOND, SIR ALFRED. *Industry and politics*. London, Macmillan & Co. (Ltd.), 1927. 337 pp.

A collection of papers and addresses dealing with various aspects of the industrial situation, and considering particularly the relation between industrial and political developments.

NATIONAL FIRE PROTECTION ASSOCIATION. Electrical committee. *Advance publication of the reports of article committees to the annual meeting, February, 1928, of the electrical committee, N. F. P. A.* New York, 109 Leonard St. [1928?]. 142 pp.

Contains proposed amendments to the national electrical code to be considered at the annual meeting scheduled to be held in New York City, February 13, 14, 15, and 16, 1928. The action taken by this committee will be reported to the National Fire Protection Association under the procedure of the American Engineering Standards Committee at its annual meeting at Atlantic City in May, 1928.

NATIONAL SAFETY COUNCIL. *Transactions, Sixteenth Annual Safety Congress, held at the Hotel Stevens, Chicago, September 26 to 30, 1927.* Chicago, 108 East Ohio Street, 1928. Vols. 1 to 3. [Various paging.]

The report of the transactions of the annual meeting of the Safety Congress contains the papers and discussions of the general sessions, of the meetings held by various sections, and of the sessions on public safety. A resolution of the health service division regarding the limits of industrial medicine and surgery is given on page 53 of this issue.

RATHBONE, ELEANOR R. *The ethics and economics of family endowment*. London, Epworth Press, 1927. 118 pp.

The author maintains that family endowment would raise the standard of life not only for the very poor but for every social class in which there is actual economic hardship.

RÉAL, CLAUDE, ET RULLIÈRE, H. *Le tabac et les aluquettes*. Paris, Gaston Doin, 1925. 360 pp.

This study gives a history of the tobacco and match industries and an account of the labor organizations and wages paid workers in each of these industries.

SAMUEL, SIR HERBERT. *The problem of the coal mines*. London, Liberal Publication Department, 1927. 16 pp.

Reviewing the conditions now existing in the British coal industry, the author feels that there is more need than ever that the recommendations of the royal commission on the coal industry should be adopted. The events of the two years since its report was issued have shown the pressing need for consolidating the various mining enterprises, for eliminating wasteful methods of mining, transportation, and distribution, for State acquisition of the royalties, for scientific research into the technical problems of the industry, for a careful study of marketing methods, and especially for the adoption of the measures recommended for improving relations between employers and employees.

SOVIET UNION INFORMATION BUREAU. *Commercial handbook of the U. S. S. R. (Union of Soviet Socialist Republics) for 1927*. Washington [1927?]. 86 pp.; maps.

STANDING JOINT COMMITTEE OF INDUSTRIAL WOMEN'S ORGANIZATIONS. *Protective legislation and women workers*. London, The Labor Party, 33 Eccleston Sq., 1927. 8 pp.

The committee declares in favor of three kinds of protective legislation for women: Legislation which would be desirable for both sexes but which can be secured for women and not for men; legislation more needed by women than by men, because of their lesser strength; and legislation for protection necessary for women because of their functions as mothers.

TUGWELL, REXFORD GUY. *Industry's coming of age*. New York, Harcourt, Brace & Co., 1927. 274 pp.; charts.

The first chapter of this volume brings together in convenient form the available statistical data regarding increased productivity of industry. This is followed by discussions of various aspects of the subject, such as theories, general and technical causes, and the extent to which industry is or may be directed to the production of the goods wanted by the consumer.

WOLFF, WILHELM. *Der Achtstundentag, seine Geschichte und die Erfahrungen mit seiner gesetzlichen Einführung in Deutschland*. Berlin, Allgemeiner Deutscher Gewerkschaftsbund, 1926. 112 pp.

A brief history of the eight-hour day in Germany with an account of the experience of various German plants with the shorter workday.

WOODS, EDWARD A., AND METZGER, CLARENCE B. *America's human wealth: The money value of human life*. New York, F. S. Crofts & Co., 1927. 193 pp.

The writers review the history of both the method and the philosophy underlying the various attempts to determine the money value of human life, and an account is given of the various estimates of the money or economic values of human beings and the reasoning on which the calculations are based.

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